

# Publications

## NSLS Users

Below are listed all publication citations reported to the NSLS in FY01 (October 1, 2000 through September 30, 2001). Citations are listed in order of beamline number and then alphabetically by the last name of the first author. This list contains unique citations for journal, published conference proceedings, books, chapters in books, formal reports, informal reports, technical reports, theses, dissertations, and patents when reported. For citation submissions indicating that research was performed on more than one beamline, the citation is listed only under the primary beamline to ensure an accurate count. Secondary beamlines are listed within the citation if reported. Citations bearing publication dates prior to the Year 2001 are listed only if they had not been previously reported to NSLS and did not appear in a prior fiscal year's activity report. Diligent effort has been made to ensure that each reference is unique and complete. For journal articles, online searches were performed to locate missing reference information (e.g., year of publication, volume, issue or page numbers). With regard to conference papers, considerable effort was put into ensuring that the citations appeared in published proceedings. Many citations for conferences papers have been omitted from this list if verification could not be made. We apologize to our users and authors for any citations incorrectly omitted.

Several types of journal articles are reported in this list, including premiere journals, peer reviewed journals and a few that are not peer reviewed. The acronym [PR] that follows certain citations in the list indicates that the article appeared in a peer reviewed journal. The acronym [PR/P] indicates that the article appeared in one of the following peer reviewed, premiere journals: Physical Review Letters, Science, Nature, Cell, Embo Journal, Nature Structural Biology, Proceedings of the National Academy of Sciences of the United States of America, Structure, or Applied Physics Letters.

In FY01, the following types and numbers of publication citations were reported to the NSLS where research was performed in part or in whole at the NSLS.

Journals, peer reviewed, premiere	139
Journals, other peer reviewed	469
Journals, non peer reviewed	9
Magazines	1
<b>Total Journals and Magazines</b>	<b>618</b>
Books	3
Chapters in Books	19
Published Conference Proceedings	120
Formal Reports	6
Informal Reports	4
Theses/Dissertations	38
Patents	0
<b>Total Misc. Publications</b>	<b>190</b>
<b>Total Citations Listed</b>	<b>808</b>
<b>NSLS VUV User Publications</b>	<b>88</b>
<b>NSLS X-Ray User Publications</b>	<b>654</b>
<b>NSLS Staff Publications</b>	<b>66</b>
	808

### Beamline U1A

- H. He, A. Mathauser, and A. Teplyakov, *Self-Limiting Heterogeneous Reactions: Bifunctional Hydrocarbon on a Bimetallic Alloy Surface*, *J. Phys. Chem. B*, Vol. 104, Issue 51, p. 12306-12314, Beamline(s) U1A, 2000. [PR]  
A. Mathauser, H. He, and A. Teplyakov, *Adsorption and thermally induced reactions of halocyclohexanes on a Cu3Pt(111) surface*, *Surf. Sci.*, Vol. 479, p. 213-223, Beamline(s) U1A, 2001. [PR]

### Beamline U2A

- A. Goncharov, V. Struzhkin, R. Hemley, H. Mao, and Z. Liu, *Advances in optical spectroscopy at multimegabar pressures*, *Science and Technology of High Pressure*, M.H. Manghnani, W.J. Nellis, and M. Nicol (Ed.) Universities Press, Hyderabad, India, p. 90, Beamline(s) U2A, 2000.  
E. Gregoryanz, A. Goncharov, R. Hemley, and H. Mao, *High-pressure amorphous nitrogen*, *Phys. Rev. B*, Vol. 64, p. 05203-1, Beamline(s) U2A, July 13, 2001. [PR]  
R. Hemley, *Effects of High Pressure on Molecules*, *Annu. Rev. Phys. Chem.*, Vol. 51, p. 763-800, Beamline(s) U2A, 2000. [PR]  
R. Hemley and H. Mao, *Progress in cryocrystals to megabar pressures*, *J. Low Temp. Phys.*, Vol. 122, p. 331, Beamline(s) U2A, 2001.  
H. Kagi, R. Lu, P. Davidson, A. Goncharov, H. Mao, and R. Hemley, *Evidence for Ice VI as an Inclusion of Cuboid Diamonds from High P-T Near Infrared Spectroscopy*, *Min. Mag.*, Vol. 64, p. 1089, Beamline(s) U2A, 2000.  
M. Koch-Müller, Y. Fei, and Z. Liu, *Polarized Single-crystal and High Pressure FTIR Spectra in the OH Stretching Region of Coesite*, *AGU 2000 fall meeting*, p. 1301, USA, Beamline(s) U2A, 2000.  
S. Nakano, R. Hemley, O. Tschauner, and H. Mao, *High-pressure/high-temperature transformations of boron hydride*, *Ultra-High Pressure Research --Novel Process for New Materials*, p. 49, Nat. Inst. Res. Inorg. Materials, Tsukuba, Japan, M. Akashi, T. Sekine, K. Takemura, T. Taniguchi, T. Kobayashi, K. Tajima and N. Aida (Ed.) Beamline(s) U2A, 2001.  
M. Somayazulu, A. Madduri, A. Goncharov, O. Tschauner, P. McMillan, H. Mao, and R. Hemley, *Novel Broken Symmetry Phase from N2O at High Pressures and High Temperatures*, *Phys. Rev. Lett.*, Vol. 87, Issue 17, p. 135504-1, Beamline(s) U2A, September 11, 2001. [PR/P]  
V. Struzhkin, R. Hemley, H. Mao, Y. Timofeev, and M. Eremets, *Electronic and magnetic studies of materials to megabar pressures*, *Hyperfine Interact.*, Vol. 128, p. 323, Beamline(s) U2A, 2000. [PR]  
Q. Williams and R. Hemley, *Hydrogen in the deep Earth*, *Annu. Rev. Earth Pl. Sc.*, Vol. 29, p. 365, Beamline(s) U2A, 2001.

### Beamline U2B

- J. Bantignies, G. Carr, D. Lutz, S. Marull, G. Williams, and G. Fuchs, *Chemical Imaging of Hair by Infrared Microspectroscopy using Synchrotron Radiation*, *J. Cosmet. Sci.*, Vol. 51, p. 73, Beamline(s) U2B, 2000. [PR]

- X. Chen, Z. Shao, N. Marinkovic, L. Miller, P. Zhou, and M. Chance, *Conformation Transition Kinetics of Regenerated Bombyx Mori Silk Fibroin Membrane Monitored by Time-Resolved FTIR Spectroscopy*, *Biophys. Chem.*, Vol. 89, p. 25-34, Beamline(s) U2B, 2001. [PR]
- N. Marinkovic, A. Adzic, M. Sullivan, K. Kovacs, L. Miller, D. Rousseau, S. Yeh, and M. Chance, *Design and Implementation of a Rapid-Mixer Flow Cell for Time-Resolved Infrared Microspectroscopy*, *Rev. Sci. Instrum.*, Vol. 71, p. 4057-4060, Beamline(s) U2B, 2000. [PR]
- L. Miller, V. Vairavamurthy, M. Chance, R. Mendelsohn, E. Paschal, F. Betts, and A. Boskey, *In Situ Analysis of Mineral Content and Crystallinity in Bone Using Infrared Micro-Spectroscopy of the V4PO4 3- Vibration*, *Biochim Biophys Acta*, Vol. 1527, p. 11-19, Beamline(s) U2B, 2001. [PR]
- V. Narayanan and S. Scarlata, *Membrane Binding and Self-Association of -Synucleins*, *Biochemistry*, Vol. 40, Issue 33, p. 9927-9934, Beamline(s) U2B, July 28, 2001. [PR]

#### Beamline U3C

- C. Bentley and A. Simmons, *Spectral response calibrations of x-ray diode photocathodes in the 50-5900 eV...*, *Rev. Sci. Instrum.*, Vol. 72, p. 1202, Beamline(s) U3C and X8A, 2001. [PR]

#### Beamline U4A

- M. Mayer, R. Olson, and E. Gouaux, *Mechanisms for ligand binding to GluR0 ion channels: crystal structures of the glutamate and serine complexes and a closed apo state*, *J. Mol. Biol.*, Vol. 311, p. 815-836, Beamline(s) U4A, 2001. [PR]
- J. Roche, P. Ryan, and G. Hughes, *Core Level Photoemission Studies of the Sulphur Terminated Ge(100) Surface*, *Appl. Surf. Sci.*, Vol. 6936, p. 1-4, Beamline(s) U4A, 2001. [PR]
- J. Roche, P. Ryan, and G. Hughes, *Core-level Photoemission Studies of the Sulphur-terminated Si(100) Surface*, *Surf. Sci.*, Vol. 465, p. 115-119, Beamline(s) U4A, October 1999, 2000. [PR]
- P. Ryan, *Synchrotron based studies of III-V Semiconductor Materials*, Ph.D. Thesis, Dublin City University, Ireland, Beamline(s) U4A and X1B, 2001.
- P. Ryan, Y. Chao, J. Downes, C. McGuinness, K. Smith, A. Sampath, and T. Moustakas, *Surface Electronic Structure of p-type GaN(0001)*, *Surf. Sci. Lett.*, Vol. 467, p. L827, Beamline(s) U4A, 2000. [PR]

#### Beamline U4B

- C. Borca, T. Komesu, H. Jeong, P. Dowben, D. Ristoiu, C. Hordequin, J. Nozieres, J. Pierre, S. Stadler, and et al, *Evidence for Temperature Dependent Moments Ordering in Ferromagnetic NiMnSb(100)*, *Phys. Rev. B*, Vol. 64, p. 052409, Beamline(s) U4B, July 16, 2001. [PR]
- R. Cheng, C. Borca, P. Dowben, S. Stadler, and Y. Idzerda, *Potential Phase Control of Chromium Oxide Thin Films Prepared by Laser-initiated Organometallic Chemical Vapor Deposition*, *Appl. Phys. Lett.*, Vol. 78, Issue 4, p. 521-523, Beamline(s) U4B, January 22, 2001. [PR/P]
- S. Gerhold, N. Nucker, C. Kunscher, S. Schuppler, S. Stadler, Y. Idzerda, A. Prokofiev, F. Bullesfeld, W. Assmus, and et al, *X-ray Absorption Spectroscopy of Single-crystalline (VO)2P2O7: Electronic Structure and Possible Exchange Paths*, *Phys. Rev. B*, Vol. 63, p. 0731103, Beamline(s) U4B, January 25, 2001. [PR]
- Y. Idzerda, *Magnetic Structures: X-ray Dichroism*, *Encyclopedia of Electronics and Electrical Engineering*, Vol. 12, J.G. Webster (Ed.) Wiley, New York, NY, USA, Beamline(s) U4B, 1999.

- Y. Idzerda, V. Chakarian, and J. Freeland, *Quantifying Magnetic Domain Correlations in Multilayer Films*, *Phys. Rev. Lett.*, Vol. 82, Issue 7, p. 1562, Beamline(s) U4B, 1999. [PR/P]
- Y. Idzerda and J. Freeland, *Quantitative Magnetic Domain Correlation by X-ray Resonant Magnetic Scattering*, *Proceedings of SPIE*, Vol. 3773, p. 236, Beamline(s) U4B, 1999.
- N. Nucker, M. Merz, C. Kuntscher, S. Gerhold, S. Schuppler, R. Neudert, M. Golden, J. Fink, D. Schild, and et al, *Hole Distribution in (Sr,Ca,Y,La)14Cu24O41 Ladder Compounds Studied by X-ray Absorption Spectroscopy*, *Phys. Rev. B*, Vol. 62, Issue 21, p. 14384-14392, Beamline(s) U4B, December 1, 2000. [PR]
- R. Osgood, S. Sinha, J. Freeland, Y. Idzerda, and S. Bader, *X-ray Scattering from Magnetic, Rough Surfaces*, *J. Appl. Phys.*, Vol. 85, p. 4619, Beamline(s) U4B, 1999. [PR]
- R. Osgood, S. Sinha, J. Freeland, Y. Idzerda, and S. Bader, *X-ray Scattering from Magnetically and Structurally Rough Surfaces*, *J. Magn. Magn. Mater.*, Vol. 198-199, p. 698, Beamline(s) U4B, 1999. [PR]
- S. Stadler, Y. Idzerda, Z. Chen, S. Ogale, and T. Venkatesan, *Magnetism of Multilayers Revealed: The Effects of Overlays on La<sub>0.7</sub>Sr<sub>0.3</sub>MnO<sub>3</sub>*, *J. Appl. Phys.*, Vol. 87, p. 6767, Beamline(s) U4B, 2000. [PR]
- S. Stadler, Y. Idzerda, Z. Chen, S. Ogale, and T. Venkatesan, *The Effects of Oxide Cap Layers on La<sub>0.7</sub>Sr<sub>0.3</sub>MnO<sub>3</sub>): An XMCD Study*, *Appl. Phys. Lett.*, Vol. 75, p. 3389, Beamline(s) U4B, 1999. [PR/P]

#### Beamline U4IR

- D. Chidambaram and G. Halada, *Infrared microspectroscopic studies on the pitting of AA2024-T3 induced by acetone degreasing*, *Surf. Interface Anal.*, Vol. 31, Issue 11, p. 1056-1059, Beamline(s) U4IR and U10B, Nov 2001. [PR]
- C. Hirschmugl, *Far Infrared Frontiers: Low Energy Vibrations and Electronic Excitations*, *Synchrotron Radiation Applications to Materials Science*, Philip Sprunger (Ed.) LSU/CAMD Publishers, Baton Rouge, LA, USA, p. 12.1-12.19, Beamline(s) U4IR, 2001.
- C. Hirschmugl, *Far Infrared Frontiers: Vibrations and Electronic Excitations*, *Synchrotron Radiation Applications to Materials Science*, CAMD/LSU Publishers, Baton Rouge, LA, USA, p. 12.1-12.20, Beamline(s) U4IR, 2001.
- X. Hu and C. Hirschmugl, *Dynamics of Atomic Adsorbates: S on Cu(100)*, *Surf. Sci.*, Vol. 490, p. 69-75, Beamline(s) U4IR, Sept 1, 2001. [PR]
- M. Pilling, T. He, and C. Hirschmugl, *Far-Infrared Reflection Absorption Spectroscopy: Low Frequency Studies on Single Crystal Oxide Surfaces*, (invited paper), *Synchrotron Radiation Instrumentation, AIP Conference Proceedings*, Vol. 521, p. 41, sponsored by SLAC, AIP conference Proceedings, Melville, NY, USA, Beamline(s) U4IR, 1999.
- W. Zhu, C. Hirschmugl, A. Laine, B. Sincovic, and S. Parkin, *Determination of the thickness of Al oxide films used as barriers in magnetic tunneling junctions*, *Appl. Phys. Lett.*, Vol. 78, Issue 20, p. 3103-3105, Beamline(s) U4IR, May 14, 2001. [PR/P]

#### Beamline U7A

- L. Andruzzini, E. Chiellini, G. Galli, X. Li, C. Ober, E. Kramer, and E. Sivaniah, *Fluorinated block copolymers: synthesis and characterization of bulk and surface structures*, *Fluoropolymer 2000: Current Frontiers and Future Trends*, D.W. Smith, Jr. (Ed.) Electronics Publishing Services, Hattiesburg, MS, USA, p. 106, Beamline(s) U7A, 2000.

- D. Burnett, *In Situ Mechanistic Studies of the Oxidation of Carbon Monoxide, Ethylene, and Acetylene Over Platinum Surfaces*, Ph.D. Thesis, University of Michigan, Michigan, USA, Beamline(s) U7A, 2001.
- J. Dvorak, T. Jirsak, and J. Rodriguez, *Fundamental studies of desulfurization processes: reaction of methanethiol on ZnO and Cs/ZnO*, *Surf. Sci.*, Vol. 479, p. 155-168, Beamline(s) U7A, 2001. [PR]
- A. Gabelnick, D. Burnett, J. Gland, and D. Fischer, *Molecular Mechanisms of Propyne Oxidation on the Pt(111) Surface: In Situ Soft X-ray Studies in Pressures of Oxygen*, *J. Phys. Chem. B*, Vol. 105, Issue 32, p. 7748-7754, Beamline(s) U7A, 2001. [PR]
- J. Genzer and K. Efimenko, *Creating Long-Lived Superhydrophobic Polymer Surfaces Through Mechanically Assembled Monolayers*, *Science*, Vol. 290, p. 2130-2133, Beamline(s) U7A, 2000. [PR/P]
- T. Hayakawa, J. Wang, M. Xiang, x. Li, M. Ueda, C. Ober, J. Genzer, E. Sivaniah, E. Kramer, and D. Fischer, *Effect of changing molecular end groups on surface properties: synthesis and characterization of poly(styrene-*b*-semifluorinated isoprene) block copolymers with -CF2H end groups*, *Macromolecules*, Vol. 33, Issue 21, p. 8012-8019, Beamline(s) U7A, 2000. [PR]
- J. Hrbek, J. Rodriguez, T. Jirsak, and J. Dvorak, *High resolution photoemission studies of sulfur interaction with model catalytic surfaces*, *J. Electron. Spectrosc. Relat. Phenom.*, Vol. 119, p. 201-206, Beamline(s) U7A, 2001. [PR]
- X. Li, Y. Ando, C. Ober, E. Kramer, and D. Fischer, *Surface self assembly in side chain modified block copolymers*, *Polym. Mater. Sci. Eng.*, Vol. 84, p. 870-871, Beamline(s) U7A, 2001. [PR]
- X. Li, Y. Ando, C. Ober, E. Sivaniah, E. Kramer, and d. Fischer, *Surface self-assembly in side chain modified block copolymers*, *Abstr. Pap.- Am. Chem. Soc., PMSE*, Vol. 221, p. 482, Beamline(s) U7A, 2001.
- X. Li, M. Xiang, C. Ober, E. Sivaniah, E. Kramer, J. Genzer, and D. Fischer, *Surface and interface behavior of semifluorinated liquid crystalline block copolymers*, *Polym. Mater. Sci. Eng.*, Vol. 83, p. 428-429, Beamline(s) U7A, 2000. [PR]
- G. Liu, J. Rodriguez, J. Hrbek, J. Dvorak, and C. Peden, *Electronic and chemical properties of Ce0.78Zr0.22O2(111) surfaces: photoemission, XANES, density-functional, and NO2 adsorption studies*, *J. Phys. Chem. B*, Vol. 105, Issue 32, p. 7762-7770, Beamline(s) U7A, 2001. [PR]
- A. Marsh, D. Burnett, D. Fischer, P. Rasmussen, and J. Gland, *Near Edge X-ray Absorption Fine Structure Characterization of Polymers Based on 2-Vinyl-4,5-dicyanoimidazole*, *Polym. Mater. Sci. Eng.*, Vol. 84, p. 1016-1017, Beamline(s) U7A, 2001. [PR]
- K. Nelson, L. Gamble, L. Jung, M. Boeckl, E. Naeemi, S. Golledge, T. Sasaki, D. Castner, C. Campbell, and P. Stayton, *Surface Characterization of Mixed Self-Assembled Monolayers Designed for Streptavidin Immobilization*, *Langmuir*, Vol. 17, p. 2807-2816, Beamline(s) U7A, 2001. [PR]
- D. Potrepka, J. Budnick, A. Moodenbaugh, D. Fischer, and W. Hines, *Combined 63,65Cu NQR and NMR study of Y1?xCa(x)Ba2Cu3O(y)*, *Physica C*, Vol. 341-348, p. 611-612, Beamline(s) U7A, Nov 2000. [PR]
- J. Rodriguez, J. Dvorak, and T. Jirsak, *Chemistry of SO2, H2S, and CH3SH on carbide-modified Mo(110) and Mo2C powders: photoemission and XANES studies*, *J. Phys. Chem. B*, Vol. 104, p. 11515-11521, Beamline(s) U7A and X19A, 2000. [PR]
- J. Rodriguez, J. Dvorak, T. Jirsak, and J. Hrbek, *Formation of Mo and MoSx nanoparticles on Au(111) from Mo(CO)6 and S2 precursors: electronic and chemical properties*, *Surf. Sci.*, Vol. 490, Issue 3, p. 315, Beamline(s) U7A, September 10, 2001. [PR]
- J. Rodriguez, J. Hrbek, J. Dvorak, T. Jirsak, and A. Maiti, *Interaction of sulfur with TiO2(110): photoemission and density-functional studies*, *Chem. Phys. Lett.*, Vol. 336, p. 377-384, Beamline(s) U7A, March 23, 2001. [PR]
- J. Rodriguez, J. Hrbek, M. Kuhn, T. Jirsak, and S. Chaturvedi, *Interaction of sulfur with Pt(111) and Sn/Pt(111): Effects of coverage and metal?metal bonding on reactivity toward sulfur*, *J. Chem. Phys.*, Vol. 113, Issue 24, p. 11284, Beamline(s) U7A, December 22, 2000. [PR]
- J. Rodriguez, T. Jirsak, and S. Chaturvedi, *Reaction of H2S with MgO(100) and Cu/Mg(100) surfaces: band-gap size and chemical reactivity*, *J. Chem. Phys.*, Vol. 111, Issue 17, p. 8077-8087, Beamline(s) U7A, 1999. [PR]
- J. Rodriguez, T. Jirsak, S. Chaturvedi, and J. Dvorak, *Chemistry of SO2 and NO2 on ZnO(0001)-Zn and ZnO powders: changes in reactivity with surface structure and composition*, *J. Mol. Catal. A: Chem.*, Vol. 167, Issue 1-2, p. 47, Beamline(s) U7A and X19A, February 20, 2001. [PR]
- J. Rodriguez, T. Jirsak, G. Liu, J. Hrbek, J. Dvorak, and A. Maiti, *Chemistry of NO2 on Oxide Surfaces: Formation of NO3 on TiO2(110) and NO2-O Vacancy Interactions*, *J. Am. Chem. Soc.*, Vol. 123, p. 9597-9605, Beamline(s) U7A, September 2001. [PR]
- J. Rodriguez, T. Jirsak, and S. Sambasivan, *Chemistry of NO2 on CeO2 and MgO: experimental and theoretical studies on the formation of NO3*, *J. Chem. Phys.*, Vol. 112, Issue 22, p. 9929-9939, Beamline(s) U7A, 2000. [PR]
- J. Rodriguez, M. Perez, T. Jirsak, L. Gonzalez, and A. Maiti, *Coadsorption of sodium and SO2 on MgO(100): alkali promoted S-O bond cleavage*, *Surf. Sci. Lett.*, Vol. 477, Issue 2-3, p. 279, Beamline(s) U7A, April 20, 2001. [PR]
- J. Rodriguez, M. Perez, T. Jirsak, L. Gonzalez, A. Maiti, and J. Larese, *DeNOx Reactions on MgO(100), ZnxMg1?xO(100), CrxMg1?xO(100), and Cr2O3(0001): Correlation between Electronic and Chemical Properties of Mixed-Metal Oxides*, *J. Phys. Chem. B*, Vol. 105, Issue 23, p. 5497, Beamline(s) U7A, February 17, 2001. [PR]
- S. Sambasivan, D. Fischer, B. DeKoven, and A. Kuperman, *Direct Observation of Propylene and Silver Transformations on the Surface and in the Pores of Silver Y Zeolites*, *Advanced Materials*, Vol. 12, p. 1809, Beamline(s) U7A, December 2000. [PR]
- E. Sivaniah, J. Genzer, G. Fredrickson, E. Kramer, M. Xiang, X. Li, and C. Ober, *Periodic surface topology of three-arm semifluorinated alkane monodendron diblock copolymers*, *Langmuir*, Vol. 17, p. 4342-4346, Beamline(s) U7A, 2001. [PR]
- W. Wallace, D. Fischer, K. Efimenko, W. Wu, and J. Genzer, *Polymer Chain Relaxation: Surface Outpaces Bulk*, *Macromolecules*, Vol. 34, Issue 15, p. 5081-5082, Beamline(s) U7A, June 2001. [PR]
- T. Wu, K. Efimenko, and J. Genzer, *Preparing High-Density Polymer Brushes by Mechanically Assisted Polymer Assembly (MAPA)*, *Macromolecules*, Vol. 34, Issue 4, p. 684+, Beamline(s) U7A, Feb 13, 2001. [PR]
- Beamline U10A**
- C. Homes, T. Vogt, S. Shapiro, S. Wakimoto, and A. Ramirez, *Optical Response of High-Dielectric-Constant Perovskite-Related Oxide*, *Science*, Vol. 293, Issue 5530, p. 673-676, Beamline(s) U10A, BNL Report No. 68250, July 27, 2001. [PR/P]
- R. Jackson, K. Michaelian, and C. Homes, *Photoacoustic Spectroscopy Using a Synchrotron Light Source, Fourier Transform Spectroscopy Meeting 2001*, p. 161-163, sponsored by Optical Society of America, Washington, DC, USA, Beamline(s) U10A, 2001.

B. Jones, P. Varughese, I. Olejniczak, J. Pigos, J. Musfeldt, C. Landee, M. Turnbull, and G. Carr, *Lattice Dynamics of the One-dimensional S=1/2 Antiferromagnet Copper*, *Chem. Mater.*, Vol. 13, p. 2127, Beamline(s) U10A and U12IR, 2001. [PR]

K. Michaelian, R. Jackson, and C. Homes, *Synchrotron infrared photoacoustic spectroscopy*, *Rev. Sci. Instrum.*, Vol. 72, Issue 12, p. 4331-4336, Beamline(s) U10A, December 2001. [PR]

J. Pigos, B. Jones, Z. Zhu, J. Mulfeldt, C. Homes, H. Koo, H. Whangbo, J. Schlueter, B. Ward, et al., *Infrared and optical properties of B-(ET)2SF2CF2SO3: evidence for a 45K Spin-Peierls transition*, *Chem. Mater.*, Vol. 13, p. 1326, Beamline(s) U10A, 2001. [PR]

G. Tzamalis, N. Zaidi, C. Homes, and A. Monkman, *Infrared optical properties of polyaniline doped with 2-acrylamido-2-methyl-1-propanesulfonic acid (AMPSA)*, *J. Phys.: Condens. Matter*, Vol. 13, p. 6297-6306, Beamline(s) U10A, July 6, 2001. [PR]

#### Beamline U10B

G. Carr, *Resolution limits for infrared microspectroscopy explored with synchrotron radiation*, *Rev. Sci. Instrum.*, Vol. 72, p. 1613, Beamline(s) U10B, 2001. [PR]

D. Chidambaram, C. Clayton, and G. Halada, *Studies on the Repassivation Behavior of Aluminum Exposed to Dichromate Solution*, *199th meeting of the Electrochemical Society*, Vol. 2001, Issue 1, p. 173, sponsored by Electrochemical Society, Pennington, NJ, USA, Beamline(s) U10B, 2001.

F. Molster, J. Bradley, M. Sitko, and J. Nuth, *Astro-Mineralogy: The Comparison of Infrared Spectra from Astrophysical Environments with those from Interplanetary Dust Particles (IDPs)*, *32nd Annual Lunar and Planetary Science Conference*, March 12-16, 2001, Houston, Texas, p. 1391, sponsored by LPI, Houston, Texas, USA, Beamline(s) U10B and U4IR, 2001.

#### Beamline U11

R. Klemm, R. Thorn, Jr., L. Stief, T. Buckley, and R. Johnson, III, *The Heat of Formation of OBrO: An Experimental Photoionization Study*, *J. Phys. Chem. A*, Vol. 105, p. 1638-42, Beamline(s) U11, 2001. [PR]

#### Beamline U12A

D. Mullins, *Reactions on Model Emission Control Catalysts Studied by Soft X-ray Photoemission*, *J. Electron. Spectrosc. Relat. Phenom.*, Vol. 333, p. 114-116, Beamline(s) U12A and X1B, 2001. [PR]

D. Mullins and K. Zhang, *The Interaction Between NO and C2H4 on Rh Loaded CeOx(111)*, *J. Phys. Chem.*, Vol. 105, Issue 7, p. 1374 - 1380, Beamline(s) U12A, February 22, 2001. [PR]

S. Overbury, D. Mullins, and L. Kundakovic, *Enhancement of Dissociation by Metal-support Interaction: Reaction of NO on Rh supported by Ceria films of controlled oxidation state*, *Surf. Sci.*, Vol. 470, p. 243, Beamline(s) U12A and X1B, 2001. [PR]

#### Beamline U12B

G. Georgiev, P. Shuanghua, E. Oyebode, P. Cebe, and M. Capel, *Real-Time Small Angle X-ray Scattering Study of Two-Stage Melt Crystallization of PEEK*, *J. Mater. Sci. - Mater. Electron.*, Vol. 36, Issue 6, p. 1349-1361, Beamline(s) U12B, 2001. [PR]

#### Beamline U13UB

A. Fedorov, S. brazovskii, V. Muthukumar, P. Johnson, J. Xue, L. Duda, K. Smith, W. McCarroll, M. Greenblatt, and S. Hulbert, *Photoemission Study of the Incommensurate to Commensurate Charge Density Wave Transition in the Quasi-One Dimensional Conductor K0?3MoO3*, *J. Phys.: Condens. Matter*, Vol. 12, p. L191, Beamline(s) U13UB, 2000. [PR]

P. Johnson, A. Fedorov, and T. Valla, *Photoemission Studies of Self-Energy Effects in Cuprate Superconductors*, *J. Electron. Spectrosc. Relat. Phenom.*, Vol. 117-118, p. 153-164, Beamline(s) U13UB, 2001. [PR]

P. Johnson, T. Valla, A. Fedorov, Z. Yusof, B. Wells, Q. Li, A. Moodenbaugh, G. Gu, N. Koshizuka, et al., *Doping and Temperature Dependence of the Mass Enhancement Observed in the Cuprate Bi2Sr2CaCu2O8?d*, *Phys. Rev. Lett.*, Vol. 87, Issue 17, p. 177007, Beamline(s) U13UB, October 8, 2001. [PR/P]

M. Kralj, A. Siber, P. Pervan, M. Milun, T. Valla, P. Johnson, and D. Woodruff, *Temperature Dependence of Photoemission from Quantum-Well States in Ag/V(100): Moving Surface-Vacuum Barrier Effects*, *Phys. Rev. B*, Vol. 64, p. 085411, Beamline(s) U13UB, August 7, 2001. [PR]

K. Smith, J. Xue, L. Duda, A. Fedorov, P. Johnson, S. Hulbert, W. McCarroll, and M. Greenblatt, *Reply to the Comment of Gweon et al*, *Phys. Rev. Lett.*, Vol. 85, p. 3986, Beamline(s) U13UB, 2000. [PR/P]

#### Beamline U16B

D. Arena, R. Bartynski, and S. Hulbert, *The electronic structure of Ag/Cu(100) and Pd/Cu(100) surface alloys studied by Auger-photoelectron coincidence spectroscopy, Many-Particle Spectroscopy of Atoms, Molecules, Clusters, and Surfaces*, J. Berakdar (Ed.) Kluwer/Plenum, Dordrecht, The Netherlands, p. 471, Beamline(s) U16B, 2001.

#### Beamline X1A

H. Ade, *Quantitation of Composition in Inhomogeneous Polymers with NEXAFS Microscopy*, (invited paper), *2nd Conference of the International Union of Microbeam Analysis Societies*, Vol. 165, p. 109-110, sponsored by Microbeam Analysis 2000, Institute of Physics Publishing, Philadelphia, PA, USA, Beamline(s) X1A, 2000.

H. Ade, *Morphology and Dynamics of Polymers in Constraint Systems*, (invited paper), *VI International Conference on X-ray Microscopy - XRN99*, Berkeley, CA, Vol. 507, p. 197-204, sponsored by American Institute of Physics, Melville, NY, USA, Beamline(s) X1A, 1999.

J. Rothe, M. Denecke, and K. Dardenne, *Soft X-Ray Spectromicroscopy Investigation of the Interaction of Aquatic Humic Acid and Clay Colloids*, *J. Colloid Interface Sci.*, Vol. 231, p. 91-97, Beamline(s) X1A, 2000. [PR]

A. Smith, *Solid-State Blending and Compatibilization of Polymers by Cryogenic Mechanical Alloying*, Ph. D. Thesis, North Carolina State University, NC, USA, Beamline(s) X1A, 1999.

A. Smith, R. Spontak, C. Koch, S. Smith, and H. Ade, *Temperature-induced Morphological Evolution in Polymer Bends Produced by Cryogenic Mechanical Alloying*, *Macromol. Mater. Eng.*, Vol. 274, p. 1-12, Beamline(s) X1A, January 2000. [PR]

D. Winesette, S. Zhu, J. Sokolov, M. Rafailovich, and H. Ade, *Time-temperature Superposition of Phase Separating Polymer Blend Films*, *High Perform. Polym.*, Vol. 12, Issue 4, p. 599-602, Beamline(s) X1A, December 2000. [PR]

B. Winn, *Tomography with a Cryogenic Scanning Transmission X-ray Microscope*, Ph.D. Thesis, SUNY Stony Brook, NY, USA, Beamline(s) X1A, 2000.

#### Beamline X1B

- U. Hergenhahn, O. Kugeler, A. Rüdel, E. Rennie, and A. Bradshaw, *Symmetry-selective Observation of the N 1s Shape Resonance in N2*, *J. Phys. Chem. A*, Vol. 105, p. 5704-5708, Beamline(s) X1B, May 18, 2001. [PR]
- A. Kivimäki, U. Hergenhahn, B. Kempgens, R. Hentges, M. Piancastelli, K. Maier, A. Rüdel, J. Tulkki, and A. Bradshaw, *Near-threshold study of Xe 3d photoionization*, *Phys. Rev. A*, Vol. 63, p. 012716-1-7, Beamline(s) X1B, December 13, 2001. [PR]
- E. Rennie, B. Kempgens, H. Köppe, U. Hergenhahn, J. Feldhaus, B. Itchkawitz, A. Kilcoyne, A. Kivimäki, K. Maier, and Piancastelli et al., *A comprehensive photoabsorption, photoionization, and shake-up excitation study of the C 1s cross section of benzene*, *J. Chem. Phys.*, Vol. 113, p. 7362-7375, Beamline(s) X1B, 2000. [PR]
- A. Rüdel, *Elektronenspektroskopische Untersuchungen zur Photoionisationsdynamik freier Moleküle nach Anregung mit Synchrotronstrahlung*, Ph. D. Thesis, Technical University Berlin, Berlin, Germany, Beamline(s) X1B, 2001.

#### Beamline X2B

- E. Landis, A. Petrell, S. Lu, and E. Nagy, *Examination of Pore Structure Using Three Dimensional Image Analysis of Microtomographic Data*, *Concrete Sci. Eng.*, Vol. 2, Issue 8, p. 162-169, Beamline(s) X2B, November 2000. [PR]

#### Beamline X3A1

- Y. Abramov, A. Volkov, G. Wu, and P. Coppens, 298. *The Experimental Charge Density Approach (ECDA) in the evaluation of intermolecular interactions. Application of a new module of the XD programming package to several solids including a pentapeptide*, *Acta Cryst. A*, Vol. A56, p. 585-591, Beamline(s) X3A1, 2000. [PR]
- P. Macchi, A. Schultz, F. Larsen, and B. Iversen, *Experimental and Theoretical Electron Density Study of the Peroxo Function in Oxoperoxo(pyridine-2,6-dicarboxylato)(hexamethylphosphoramide)molybdenum(IV)*: Implications for Olefin Epoxidation by Peroxo Transition Metal Complexes, *J. Phys. Chem. A*, Vol. 105, p. 9231-9242, Beamline(s) X3A1, September 19, 2001. [PR]
- J. Overgaard, *Utilizing the Versatility of X-ray Diffraction in Chemistry. Charge Density Analyses and Structural Correlations*, Ph.D. Thesis, University of Aarhus, Denmark, Beamline(s) X3A1, 2001.
- J. Overgaard, B. Schiott, F. Larsen, and B. Iversen, *The Charge Density Distribution in a Model Compound of the Catalytic Triad in Serine Proteases*, *Chem. Eur. J.*, Vol. 7, Issue 17, p. 3756-3767, Beamline(s) X3A1, September 15, 2001. [PR]
- L. Ribaud, G. Wu, Y. Zhang, and P. Coppens, 301. *A modified Pinkerton-type He gas-flow system for high-accuracy data collection at the X3 SUNY synchrotron beamline at NSLS*, *J. Appl. Cryst.*, Vol. 34, p. 76-79, Beamline(s) X3A1, 2001. [PR]
- A. Volkov, Y. Abramov, and P. Coppens, *Density optimized radial exponents for X-ray charge density refinement from ab initio crystal calculations*, *Acta Cryst. A*, Vol. 47, p. 272-282, Beamline(s) X3A1, May 2000. [PR]

A. Volkov and P. Coppens, *Critical examination of the radial functions in the Hansen-Coppens multipole model through topological analysis of primary- and refined-theoretical densities*, *Acta Cryst. A*, Vol. 57, p. 395-405, Beamline(s) X3A1, July 2001. [PR]

C. Wilson, B. Iversen, J. Overgaard, F. Larsen, G. Wu, S. Palii, G. Timco, and N. Gerbeleu, *Multi-Temperature Crystallographic Studies of Mixed-Valence Polynuclear Complexes; Valence Trapping Process in the Trinuclear Oxo-Bridged Iron Compound, [Fe3O(O2CC(CH3)3)6(C5H5N)3]*, *J. Am. Chem. Soc.*, Vol. 122, p. 11370-11379, Beamline(s) X3A1, January 11, 2000. [PR]

#### Beamline X3A2

- T. Liu, *Amphiphilic Block Copolymers: Self-Assembly, Phase Behaviors and New Applications on Biology, Materials Science and Polymer Synthesis*, Ph.D. Thesis, SUNY at Stony Brook, NY, USA, Beamline(s) X3A2 and X27C, 1999.
- T. Liu, D. Liang, L. Song, and B. Chu, *Spatial Open Network Formed by Mixed Block Copolymers as a New Medium for Double-Stranded DNA Separation by Capillary Electrophoresis, Electrophoresis*, Vol. 22, p. 449, Beamline(s) X3A2, Feb. 2001. [PR]
- S. Ran, S. Cruz, X. Zong, D. Fang, B. Chu, and B. Hsiao, *Structure Development during the Heat-draw Process of Nylon 66 Fiber by Synchrotron X-ray Diffraction, Advances in X-ray Analysis*, Vol. 43, p. 313-318, Beamline(s) X3A2, 2000.
- S. Ran, D. Fang, X. Zong, B. Hsiao, B. Chu, and P. Cunniff, *Structural changes during deformation of Kevlar fibers via on-line synchrotron SAXS/WAXD techniques*, *Polymer*, Vol. 42, p. 1601-1612, Beamline(s) X3A2 and X27C, 2001. [PR]
- S. Ran, X. Zhong, D. Fang, B. Hsiao, B. Chu, and R. Ross, *Novel image analysis of two-dimensional x-ray fiber diffraction patterns: example of a polypropylene fiber drawing study*, *J. Appl. Cryst.*, Vol. 33, p. 1031-1036, Beamline(s) X3A2, 2000. [PR]
- S. Ran, X. Zong, D. Fang, B. Hsiao, B. Chu, and R. Phillips, *Structural and morphological studies of isotactic polypropylene fibers during heat/draw deformation by in-situ synchrotron SAXS/WAXD*, *Macromolecules*, Vol. 34, Issue 8, p. 2569-2578, Beamline(s) X3A2, 2001. [PR]

#### Beamline X3B1

- M. Bushey, A. Hwang, P. Stephens, and C. Nuckolls, *Enforced Stacking in Crowded Arenes*, *J. Am. Chem. Soc.*, Vol. 123, p. 8157-8158, Beamline(s) X3B1, 2001. [PR]
- A. Dertinger, R. Dinnebier, A. Kreyssig, P. Stephens, S. Pagola, M. Loewenhaupt, S. van Smaalen, and H. Braun, *Microscopic changes in HoNi<sub>2</sub>B<sub>2</sub>C due to thermal treatment and its effect on superconductivity*, *Phys. Rev. B*, Vol. 63, p. 184518-1 to 184518-7, Beamline(s) X3B1, May 2001. [PR]
- R. Dinnebier, M. Schweiger, B. Bildstein, K. Shankland, W. David, A. Jobst, and S. Smaalen, *The disordered structure of tetraferrocenyl-[3]-cumulene, (FC)<sub>2</sub>C=C=C=(FC)<sub>2</sub>, by simulated annealing using synchrotron powder diffraction data*, *J. Appl. Cryst.*, Vol. 33, p. 1199-1207, Beamline(s) X3B1, 2000. [PR]
- M. Gomez, G. Lucotti, J. de Moran, P. Aymonino, S. Pagola, P. Stephens, and R. Carboni, *Ab-Initio Structure Solution of BaFeO<sub>2.8</sub>-d, a new Polytype in the System BaFeO<sub>y</sub> (2.5 <= y <= 3.0) prepared from the oxidative thermal decomposition of BaFe[(Cn)5NO] dot 3H<sub>2</sub>O*, *J. Solid State Chem.*, Vol. 160, p. 17-24, Beamline(s) X3B1, 2001. [PR]

- E. Gutierrez, R. Powell, F. Furuya, J. Hainfeld, T. Schaff, M. Shafiqullin, P. Stephens, and R. Whetten, *Greengold, a giant cluster compound of unusual electronic structure*, *Eur. Phys. J. D*, Vol. 9, p. 647-651, Beamline(s) X3B1, 1999. [PR]
- J. Kaduk, *X-ray Diffraction in the Petrochemical Industry, Industrial Applications of X-ray Diffraction*, F.K. Chung and D.K. Smith (Ed.) Marcel Dekker, New York, New York, USA, p. 207-256, Beamline(s) X3B1, 2000.
- R. McQueeney, J. Sarrao, P. Pagliuso, P. Stephens, and R. Osborn, *Mixed Lattice and Electronic States in High Temperature Superconductors*, *Phys. Rev. Lett.*, Vol. 87, p. 077001, Beamline(s) X3B1, 2001. [PR/P]
- S. Pagola and P. Stephens, *Towards the solution of organic crystal structures by powder diffraction*, *Materials Science Forum*, Vol. 321-3, p. 40-45, Beamline(s) X3B1, 2000.
- Y. Soo, G. Kioseoglou, S. Huang, S. Kim, Y. Kao, Y. Takatani, S. Haneda, and H. Munekata, *Studies of impurities in magnetic semiconductors: an example of important XAFS applications*, *J. Synch. Rad.*, Vol. 8, p. 874-876, Beamline(s) X3B1, 2001. [PR]
- R. von Dreele, P. Stephens, G. Smith, and R. Blessing, *The first protein crystal structure determined from high-Resolution X-ray powder diffraction data: a variant of T3R3 human insulin-zinc complex produced by grinding*, *Acta Cryst. D*, Vol. 56, p. 1549-1553, Beamline(s) X3B1, 2000. [PR]
- Beamline X3B2**
- C. Botez, W. Elliott, P. Miceli, and P. Stephens, *Thermal expansion of hte Ag(111) surface measured by x-ray scattering*, *Phys. Rev. B*, Vol. 63, Issue 11, p. 113404, Beamline(s) X3B2, March 15, 2001. [PR]
- C. Botez, P. Miceli, and P. Stephens, *Temperature Dependence of the surface roughening during the homoepitaxial growth on Cu(100)*, *Phys. Rev. B: Condens. Matter*, Vol. 64, p. 125427, Beamline(s) X3B2, 2001. [PR]
- Beamline X4A**
- J. Arndt, W. Gong, X. Zhong, A. Showalter, J. Liu, C. Dunlap, Z. Lin, C. Paxson, M. Tsai, and M. Chan, *Insight into the Catalytic Mechanism of DNA Polymerase beta : Structures of Intermediate Complexes*, *Biochemistry*, Vol. 40, Issue 18, p. 5368-5375, Beamline(s) X4A, April 10, 2001. [PR]
- S. Buchanan, B. Smith, L. Venkatramani, D. Xia, L. Esser, M. Palnitkar, R. Chakraborty, D. van der Helm, and J. Deisenhofer, *Crystal structure of the outer membrane active transporter FepA from Escherichia coli*, *Nat. Struct. Biol.*, Vol. 6, Issue 1, p. 56-63, Beamline(s) X4A and X12B, January 1999. [PR/P]
- L. Chantalat, D. Leroy, O. Filhol, A. Nueda, M. Benitez, E. Chambaz, C. Cochet, and O. Dideberg, *Crystal structure of the human protein kinase CK2 regulatory subunit reveals its zinc finger-mediated dimerization*, *EMBO J.*, Vol. 18, Issue 11, p. 2930-40, Beamline(s) X4A, June 1999. [PR/P]
- H. Choi, S. Kim, P. Mukhopadhyay, S. Cho, J. Woo, G. Storz, and S. Ryu, *Structural basis of the redox switch in the OxyR transcription factor*, *Cell*, Vol. 105, p. 103-113, Beamline(s) X4A, April 2001. [PR/P]
- A. Clements, *Biophysical Characterization and Structural Studies of Two E1A-interacting Proteins: the pRB Tumor Suppressor and the PCAF Coactivator*, Ph.D. Thesis, University of Pennsylvania, Pennsylvania, USA, Beamline(s) X4A, 2000.
- D. Fass, C. Bogdan, and J. Berger, *Crystal structure of the N-terminal domain of the DnaB hexameric helicase*, *Structure Fold. Des.*, Vol. 7, Issue 6, p. 691-8, Beamline(s) X4A, June 15, 1999. [PR]
- D. Fass, C. Bogden, and J. Berger, *Quaternary changes in topoisomerase II may direct orthogonal movement of two DNA strands*, *Nat. Struct. Biol.*, Vol. 6, Issue 4, p. 322-6, Beamline(s) X4A, April 1999. [PR/P]
- K. Hakansson, A. Wang, and C. Miller, *The structure of aspartyl dipeptidase reveals a unique fold with a Ser-His-Glu catalytic triad*, *Proc Natl Acad Sci USA*, Vol. 97, Issue 26, p. 14097-102, Beamline(s) X4A and X12C, Dec 19, 2000. [PR/P]
- M. Hargrove, E. Brucker, B. Stec, G. Sarah, R. Arredondo-Peter, R. Klucas, J. Olson, and G. Phillips, *Crystal structure of a nonsympiotic plant hemoglobin*, *Structure Fold. Des.*, Vol. 8, Issue 9, p. 1005-14, Beamline(s) X4A, September 15, 2000. [PR]
- W. Hendrickson, *Maturation of MAD phasing for the determination o fmacromolecular structures*, *J. Synch. Rad.*, Vol. 6, p. 845-851, Beamline(s) X4A, 1999. [PR]
- W. Huang, T. Haas, J. Biesterfeldt, L. Mankawsky, R. Blanton, and X. Lee, *Purification and crystallization of a novel membrane-anchored protein: the schistosoma haematobium serpin*, *Acta Cryst. D*, Vol. D55, p. 350-352, Beamline(s) X4A, 1999. [PR]
- Y. Huang, Y. Park, R. Rich, D. Segal, D. Myszka, and H. Wu, *Structural basis of caspase inhibition by XIAP: differential roles of the linker versus the BIR domain*, *Cell*, Vol. 104, p. 781-790, Beamline(s) X4A, 2001. [PR/P]
- S. Kim, D. Jeong, S. Chi, J. Lee, and S. Ryu, *Crystal structure of proteolytic fragments of the redox-sensitive Hsp33 with constitutive chaperone activity*, *Nat. Struct. Biol.*, Vol. 8, Issue 5, p. 459-466, Beamline(s) X4A, May 2001. [PR/P]
- M. Kimple, D. Siderovski, and J. Sondek, *Functional relevance of the disulfide-linked complex of the N-terminal PDZ domain of InaD with NorpA*, *EMBO J.*, Vol. 20, Issue 16, p. 4414-4422, Beamline(s) X4A, August 15, 2001. [PR/P]
- P. Kwong, R. Wyatt, S. Majeed, J. Robinson, R. Sweet, J. Sodroski, and W. Hendrickson, *Structures of HIV-1 gp120 Envelope Glycoproteins from Laboratory-Adapted and Primary Isolates*, *Structure*, Vol. 8, p. 1329-1339, Beamline(s) X4A, 2000. [PR/P]
- C. Lima, L. Wang, and S. Shuman, *Structure and mechanism of yeastat RNA triphosphatase: an essential component of the mRNA capping apparatus*, *Cell*, Vol. 99, p. 533-543, Beamline(s) X4A, November 1999. [PR/P]
- A. Marina, C. Mott, A. Auyzenberg, W. Hendrickson, and C. Waldburger, *Structural and Mutational Analysis of the PhoQ Histidine kinase Catalytic Domain. Insight into the reaction mechanism*, *J. Biol. Chem.*, Vol. 276, p. 41182-41190, Beamline(s) X4A, November 2001. [PR]
- K. Maxwell, M. Powell, M. Hulett, P. Barton, I. McKenzie, T. Garrett, and P. Hogarth, *Crystal structure of the human leukocyte Fc receptor, Fc gammaRIIa*, *Nat. Struct. Biol.*, Vol. 6, Issue 5, p. 437-42, Beamline(s) X4A, May 1999. [PR/P]
- Y. Mo, *Structural Studies of Transcriptional Regulation at the Human C-FOS Serum Response Element*, Ph.D. Thesis, University of Pennsylvania, Pennsylvania, USA, Beamline(s) X4A and X8C, 2000.
- S. Prigge, R. Mains, B. Eipper, and L. Amzel, *New insights into copper monooxygenases and peptide amidation: structure, mechanism and function*, *Cell Mol. Life Sci.*, Vol. 57, p. 1236-1259, Beamline(s) X4A, August 2000. [PR]
- S. Raghunathan, A. Kozlov, T. Lohman, and G. Waksman, *Structure of the DNA binding domain of E. coli SSB bound to ssDNA*, *Nat. Struct. Biol.*, Vol. 7, Issue 8, p. 648-52, Beamline(s) X4A, August 2000. [PR/P]
- L. Silvian, J. Wang, and T. Steitz, *Insights into editing from an Ile-tRNA synthetase structure with tNA(Ile) and mupirocin*, *Science*, Vol. 285, Issue 5430, p. 1074-1077, Beamline(s) X4A and X12C, August 13, 1999. [PR/P]

- W. Somers, J. Tang, G. Shaw, and R. Campha, *Insights into the molecular basis of leukocyte tethering and rolling revealed by structures of p-ahd e-selectin bound to SLeX and PSGL-1*, *Cell*, Vol. 103, p. 467-479, Beamline(s) X4A, October 2000. [PR/P]
- J. Trincao, R. Johnson, C. Escalante, L. Prakash, S. Prakash, and A. Aggarwal, *Structure of the Catalytic Core of *S. cerevisiae* DNA Polymerase: Implications for Translesion DNA Synthesis*, *Mol. Cell*, Vol. 8, Issue 2, p. 417-426, Beamline(s) X4A, August 2001. [PR]
- M. Willis, B. Bishop, L. Regan, and A. Brunger, *Dramatic structural and thermodynamic consequences of repacking a protein's hydrophobic core*, *Structure Fold. Des.*, Vol. 8, Issue 12, p. 1319-28, Beamline(s) X4A, December 15, 2000. [PR]
- S. Wolfe, R. Grant, M. Elrod-Erickson, and C. Pabo, *Beyond the "Recognition Code": Structures of Two Cys2His2 Zinc Finger/TATA Box Complexes*, *Structure*, Vol. 9, p. 717, Beamline(s) X4A, August 2001. [PR/P]
- D. Worthy lake, K. Rossman, and J. Sondek, *Crystal structure of Rac1 in complex with the guanine nucleotide exchange region of Tiam1*, *Nature*, Vol. 408, Issue 6813, p. 682-688, Beamline(s) X4A, December 7, 2000. [PR/P]
- G. Xu, M. Cirilli, Y. Huang, R. Rich, D. Myszka, and H. Wu, *Covalent inhibition revealed by the crystal structure of the caspase-8/p35 complex*, *Nature*, Vol. 410, p. 494-497, Beamline(s) X4A, 2001. [PR/P]
- Y. Xu, G. Bhargava, H. Wu, G. Loeber, and L. Tong, *Crystal structure of human mitochondrial NAD(P)+- dependent malic enzyme: a new class of oxidative decarboxylases*, *Structure Fold. Des.*, Vol. 7, Issue 8, p. R877-89, Beamline(s) X4A, August 15, 1999. [PR]
- X. Zhu, J. Kim, J. Newcomb, P. Rose, D. Stover, L. Toledo, H. Zhao, and K. Morgenstern, *Structural analysis of the lymphocyte-specific kinase lck in complex with non-selective and Src family selective kinase inhibitors*, *Structure Fold. Des.*, Vol. 15, Issue 7(6), p. 651-61, Beamline(s) X4A, 1999. [PR]
- ### Beamline X5A
- A. Honig, X. Wei, A. Lewis, E. ter Harr, and K. Seraji-Bozorgzad, *High Equilibrium Spin-Polarizations in Solid 129 Xenon*, *Physica B*, Vol. 2049, p. 284-288, Beamline(s) X5A, 2000. [PR]
- A. Honig, X. Wei, F. Lincoln, M. Lowry, A. Sandorfi, A. Lewis, S. Whisnant, C. Commeaux, J. Didelez, and C. Schaerf, *Large Transportable Polarized Solid HD Targets*, *Proceedings of Int'l Workshop on Polarized Sources and Targets*, *PST 99*, p. 392, Erlangen, Germany, Beamline(s) X5A, 2000.
- S. Jonas, A. Kuczewski, and C. Thorn, *An Improved Phase Retrieval Algorithm for Coherent Beams*, *Conference on Lasers and Electro-Optics*, Vol. 56, Issue CLEO (2001), p. 462-463, sponsored by Optical Society of America, Optical Society of America, Washington D.C., MD, USA, Beamline(s) X5A, 2001.
- A. Kuczewski, "High-power UV Generation by Coherent Enhanced Resonant Ring Cavity", Master of Science in Electrical Engineering Thesis, Polytechnic University, New York, USA, Beamline(s) X5A, 1998.
- A. Kuczewski, M. Shaw, and C. Thorn, "Optimization of resonant ring cavity for second and fourth harmonic generation of a Nd:YLF laser", *Conference on Lasers and Electro-Optics*, Vol. CThD3, sponsored by Optical Society of America, Washington, DC, USA, Beamline(s) X5A, 2000.
- X. Wei, K. Ardashev, O. Bartalini, M. Blecher, A. Caracappa, A. D'Angelo, J. Didelez, R. Deininger, K. Hicks, et al., *Research Program with new Frozen-spin HD Targets at LEGS*, (invited paper), *The International Workshop on Laser Electron Photons at SPring-8, LEPS2000*, Vol. 1, Issue 1, p. 33, sponsored by RCNP and JASRI, Osaka University, Osaka, Japan, Beamline(s) X5A, 2001.
- X. Wei, F. Lincoln, M. Lowry, T. Saitoh, and A. Sandorfi, *The new LEGS Highly Polarized Frozen-spin Solid HD Target Facility*, (invited paper), *SPIN2000, 14th Internal Spin Physics Symposium*, Vol. CP570, Issue 1, p. 846, sponsored by IUPAP, RCNP and COE, AIP, Osaka, Japan, Beamline(s) X5A, 2001.
- ### Beamline X6A
- L. Chen, P. Lee, D. Gosztola, W. Svec, and M. Wasielewski, *Time-resolved energy-dispersive XAS studies of photoinduced electron transfer intermediates in electron donor-acceptor complexes*, *J. Synch. Rad.*, Vol. 6, p. 403-405, Beamline(s) X6A, 1999. [PR]
- H. Kao, G. Cargill, and C. Hu, *Electromigration of copper in Al(0.25 at.% Cu) conductor lines*, *J. Appl. Phys.*, Vol. 89, Issue 5, p. 2588-2597, Beamline(s) X6A and X8A, March 1, 2001. [PR]
- B. Pinkoski, I. Zacharia, A. Hershcovitch, E. Johnson, and D. Siddons, *X-ray Transmission through a Plasma Window*, *Rev. Sci. Instrum.*, Vol. 72, Issue 3, p. 1677-1679, Beamline(s) X6A, March 2001. [PR]
- ### Beamline X7A
- D. Argyriou, J. Mitchell, J. Jorgensen, J. Goodenough, P. Radaelli, D. Cox, and H. Bordallo, *Structure and Magnetism in the Layered CMR Manganites La(2-2x)Sr(1+2x)Mn2O7 (x = 0.3, 0.4)*, *Aust. J. of Phys.*, Vol. 52, p. 279-304, Beamline(s) X7A, 1999. [PR]
- M. Balasubramanian, X. Sun, X. Yang, and J. McBreen, *In situ X-ray diffraction and X-ray absorption studies of high-rate lithium-ion batteries*, *J. Power Sources*, Vol. 92, p. 1, Beamline(s) X7A and X18A, 2000. [PR]
- B. Campbell, A. Cheetham, T. Vogt, L. Carlucci, W. Parker, C. Flego, and R. Millini, *The Determination of Brønsted Acid Sites in Zeolite ERS-7 by Neutron and X-ray Powder Diffraction*, *J. Phys. Chem. B*, Vol. 105, p. 1947-1955, Beamline(s) X7A, BNL Report No. 67640, 2000. [PR]
- D. Cox, T. Iglesias, E. Moshopoulou, K. Hirota, K. Takahashi, and Y. Endoh, *Vertical Boundary at x ~0.11 in the Structural Phase Diagram of the La(1-x)Sr(x)MnO3 System (0.08 <x <0.125*, *Phys. Rev. B*, Vol. 64, p. 024431-1, Beamline(s) X7A, 2001. [PR]
- D. Cox, B. Noheda, G. Shirane, Y. Uesu, K. Fujishiro, and Y. Yamada, *Universal phase diagram for high-piezoelectric Perovskite systems*, *Appl. Phys. Lett.*, Vol. 79, p. 400, Beamline(s) X7A, 2001. [PR/P]
- L. Lewis, A. Moodenbaugh, D. Welch, and V. Panchanathan, *Stress, Strain, and Technical Magnetic Properties in Exchange-Spring Nd2Fe14B+a-Fe nanocomposite magnets*, *J. Phys. D: Appl. Phys.*, Vol. 34, p. 744-751, Beamline(s) X7A, Mar 2001. [PR]
- A. Moodenbaugh and D. Cox, *Low Temperature X-ray Diffraction Study of La<sub>2-x</sub>M(x)CuO<sub>4</sub>, M=Ba, Sr*, *Physica C*, Vol. 341-348, p. 1775-1778, Beamline(s) X7A, Nov 2000. [PR]
- B. Noheda, D. Cox, G. Shirane, R. Guo, B. Jones, and L. Cross, *Stability of the monoclinic phase in the ferroelectric perovskite PbZr<sub>1-x</sub>TixO<sub>3</sub>*, *Phys. Rev. B*, Vol. B63, p. 014103, Beamline(s) X7A, 2000. [PR]

- D. Olson, N. Khosrovani, A. Peters, and B. Toby, *Crystal structure of Dehydrated CsZSM-5 (5.8Al): Evidence for non-random aluminum distribution*, *J. Phys. Chem. B*, Vol. 104, Issue 20, p. 4844-4848, Beamline(s) X7A, 2000. [PR]
- H. Xu, P. Heaney, and A. Navrotsky, *Thermal expansion and structural transformations of stuffed derivatives of quartz along the LiAlSiO<sub>4</sub>-SiO<sub>2</sub> join: A variable-temperature powder synchrotron XRD study*, *Phys. Chem. Miner.*, Vol. 28, p. 302-312, Beamline(s) X7A, June 2001. [PR]
- H. Xu, A. Navrotsky, M. Balmer, Y. Su, and E. Bitten, *Energetics of substituted pollucites along the CsAlSi<sub>2</sub>O<sub>6</sub>-CsTiSi<sub>2</sub>O<sub>6</sub>?5 join: A high-temperature calorimetric study*, *J. Am. Ceram. Soc.*, Vol. 84, p. 555-560, Beamline(s) X7A, March 2001. [PR]
- X. Yang, X. Sun, M. Balasubramanian, J. McBreen, Y. Xia, T. Sakai, and M. Yoshio, *A Systematic Study of Intercalation Compounds as Cathode Materials for Lithium Batteries*, (invited paper), *Third Hawaii Battery Conference, January 3-6, 2001, Big Island, Hawaii, USA*, p. 241, Beamline(s) X7A and X18A, 2001.
- X. Yang, X. Sun, J. McBreen, S. Mukerjee, Y. Gao, M. Yakovleva, X. Xing, and M. Daroux, *In situ X-ray Diffraction Studies of Cathode Materials in Lithium Batteries*, (invited paper), *Second Hawaii Battery Conference, January 4-7, 1999 Hawaii*, p. 352, sponsored by ARAD Enterprises and the Hawaii Natural Energy Institute/ University of Hawaii, Hawaii, Beamline(s) X7A and X19A, 1999.
- Beamline X7B**
- G. Artioli, K. Stahl, C. Cruciani, A. Gualtieri, and J. Hanson, *In Situ Dehydration of Yugawaralite*, *Am. Mineral.*, Vol. 86, p. 185-192, Beamline(s) X7B, June 2001. [PR]
- A. Christensen, A. Bareges, R. Nielsen, R. Hazell, P. Norby, and J. Hanson, *Study of Formation of Cobalt and Zinc Phosphates in Solvothermal Synthesis Using Piperazine and 2-Methylpiperazine as Tempating Molecules*, *J. Chem. Soc., Dalton Trans.*, Vol. 2001, p. 1611-1615, Beamline(s) X7B, June 2001. [PR]
- P. Chupas, M. Ciraolo, J. Hanson, and C. Grey, *In-situ X-ray Powder Diffraction and Solid State NMR Study of the Fluorination of a-Al<sub>2</sub>O<sub>3</sub> with HCF<sub>2</sub>Cl*, *J. Am. Chem. Soc.*, Vol. 123, p. 1694-1702, Beamline(s) X7B, Jan 2001. [PR]
- M. Ciraolo, *Characterization of Zeolite Structure and Fluorocarbon Reactivity Using Solid State NMR and*, PhD Thesis, State Univ. of New York, NY, USA, Beamline(s) X7B, 2000.
- M. Ciraolo, J. Hanson, P. Norby, and C. Grey, *An In-situ X-ray Powder diffraction Study of the Adsorption of Hydrofluorocarbons in Zeolites*, *J. Phys. Chem. B*, Vol. 105, p. 2604-2611, Beamline(s) X7B, June 2001. [PR]
- A. Dattelbaum, *Design, Characterization and Reactivity of Copper(I)-Zirconium(IV) Halide Analogs of Metal Oxides*, Ph.D. Thesis, North Carolina State University, North Carolina, USA, Beamline(s) X7B and ATF 0, 2000.
- A. Giraudeau, S. Lobstein, L. Ruhlmann, D. Melamed, K. Barkigia, and J. Fajer, *Electrosynthesis, electrochemistry, and crystal structure of the tetracationic Zn-meso-tetrapyrnidiumyl-b-octaethylporphyrin*, *J. Porphyrins Phthalocyanines*, Vol. 5, p. 793-797, Beamline(s) X7B, 11/2001 2001. [PR]
- P. Heaney and J. Post, *Evidence for an I2/a to Imab phase transition in the silica polymorph moganite at ~570 K*, *Am. Mineral.*, Vol. 86, Issue 11-12, p. 1358-1366, Beamline(s) X7B, Nov-Dec 2001. [PR]
- P. Heaney, J. Post, J. Hanson, and S. Komarneni, *X-ray diffraction evidence for transition metal cation exchange in anionic clays in room-temperature aqueous fluids*, *Geological Society of America Annual Meeting*, Vol. 33, Issue 6, p. A-362, sponsored by Geological Society of America, Geological Society of America, Denver, CO, USA, Beamline(s) X7B, 2001.
- M. Hellwell, *Anomalous scattering for small-molecule crystallography*, *J. Synch. Rad.*, Vol. 7, p. 139-147, Beamline(s) X7B, 2000. [PR]
- H. Hillhouse, J. van Egmond, M. Tsapatsis, J. Hanson, and J. Larese, *The interpretation of X-ray diffraction data for the determination of Channel orientation in mesoporous films*, *Microporous Mesoporous Mater.*, Vol. 44-45, p. 639-643, Beamline(s) X7B, Jan 2001. [PR]
- H. Hillhouse, J. van Egmond, M. Tsapatsis, J. Hanson, and J. Larese, *Synthesis and Charactrization of Ordered Arrays of Topological Defects in Mesoporous Silica Films*, *Chem. Mater.*, Vol. 12, p. 2888-2893, Beamline(s) X7B, Oct 2000. [PR]
- C. Landry, S. Tolbert, K. Gallis, A. Monnier, G. Stucky, P. Norby, and J. Hanson, *Phase Transformation in Mesostructured Silica/Surfactant Composites. Mechanisms for Charge and Appications to Materials Synthesis*, *Chem. Mater.*, Vol. 13, p. 1600-1608, Beamline(s) X7B, May 2001. [PR]
- Y. Lee, B. Reisner, J. Hanson, G. Jones, J. Parise, D. Corbin, B. Toby, A. Freitag, and J. Larese, *New Insight into Cation Relocation within the Pores of ZeoliteRho: In Situ Sychrotron X-ray and Neutron Powder Diffraction Studies of Pb- and Cd- Exchanged Rho*, *J. Phys. Chem. B*, Vol. 105, p. 7188-7199, Beamline(s) X7B, Aug 2001. [PR]
- H. Liu, R. Sullivan, J. Hanson, C. Grey, and J. Martin, *Kinetics and Mechanism of the  $\beta$ - to a CuAlCl<sub>4</sub> Phase Transition: A Time Resolved <sup>63</sup>Cu MAS NMR and Powder X-ray Diffraction Study*, *J. Am. Chem. Soc.*, Vol. 123, Issue 31, p. 7564-7573, Beamline(s) X7B, Aug 2001. [PR]
- J. Martin and T. Thornton, *Liquid Crystalline Zinc Chloride*, *Materials Research Society: Liquid Crystal Materials and Devices*, Vol. 559, p. 243-248, Warrendale, Pennsylvania, USA, Beamline(s) X7B, 1999.
- F. Mo, B. Hauback, R. Mathiesen, Kvick, and E. Weckert, *Physical estimation of triplet phases - effects of different radiation sources and modes for profile scans*, *J. Synch. Rad.*, Vol. 5, p. 1369-1374, Beamline(s) X7B, 1998. [PR]
- M. Novotnak, *Metallootropic Liquid Crystals*, MS. Thesis, North Carolina State University, North Carolina, USA, Beamline(s) X7B, 2000.
- A. Phadke, B. Robinson, K. Barkigia, and J. Fajer, *Synthesis of Benzochlorins and Rhodinobenzochlorins*, *Tetrahedron*, Vol. 56, p. 7661-7666, Beamline(s) X7B, 2000. [PR]
- J. Post, P. Heaney, and J. Hanson, *Temperature-resolved synchrotron X-ray diffraction study of ramsdellite and gROUTITE*, *Geological Society of America Annual Meeting*, Vol. 33, Issue 6, p. A362-A363, sponsored by Geological Society of America, Geological Society of America, Denver, CO, USA, Beamline(s) X7B, 2001.
- X. Shi, K. Barkigia, J. Fajer, and C. Drain, *Design and Synthesis of Porphyrins Bearing Rigid Hydrogen Bonding Motifs: Highly Versatile Building Blocks for Self-Assembly of Polymers and Discrete Arrays*, *J. Org. Chem.*, Vol. 66, Issue 20, p. 6513-6522, Beamline(s) X7B, October 2001. [PR]
- T. Thornton, *Liquid Crystalline Complex Fluids of Cetyltrimethylammonium Zinc(II) Halides*, MS. Thesis, North Carolina State University, North Carolina, USA, Beamline(s) X7B, 1999.

S. Tolbert, C. Landry, G. Stucky, B. Chmelka, P. Norby, J. Hanson, and A. Monnier, *Phase Transitions in Mesostructured Silica/Surfactant Compositie: Surfactant Packing and the Role of Charge Density Matching*, *Chem. Mater.*, Vol. 13, p. 2247-2256, Beamline(s) X7B, Aug 2001. [PR]

D. Williams, J. Kruger, A. McLeroy, A. Wilkinson, and J. Hanson, *Iridium(III) Amine Complexes as High-Stability Structure-Directing Agent for the Synthesis of Metal Phosphates*, *Chem. Mater.*, Vol. 11, p. 2241-2249, Beamline(s) X7B, 1999. [PR]

### Beamline X8A

K. Hwang, G. Cargill III, and T. Marieb, *Strain Measurements from Single Grains in Passivated Aluminum Conductor Lines by X-Ray Microdiffraction During Electromigration*, *MRS Symp. Proc.*, Vol. 612, p. D8.6.1, Beamline(s) X8A, 2001.

H. Kao, G. Cargill III, and C. Hu, *Concentration and Stress Evolution During Electromigration in Passivated Al(0.25 at.% Cu) Conductor Lines*, *MRS Symp. Proc.*, Vol. 612, p. D1.8.1, Beamline(s) X8A, 2001.

S. Kim, V. Gopalan, and B. Steiner, *Direct x-ray synchrotron imaging of strains at 180 degree doamin walls in congruent LiNbO<sub>3</sub> and LiTaO<sub>3</sub> crystals*, *Appl. Phys. Lett.*, Vol. 77, Issue 13, p. 2051-53, Beamline(s) X8A, September 25, 2000. [PR/P]

### Beamline X8C

B. Ahvazi, R. Coulombe, M. Delarge, L. Zhang, M. Vedadi, E. Meighen, and A. Vrielink, *Crystal structure of the NADP+ dependant aldehyde dehydrogenase from Vibrio harveyi Structural implications for cofactor specificity and affinity*, *Biochem. J.*, Vol. 349, p. 853-861, Beamline(s) X8C and X12C, 2000. [PR]

J. Allard, P. Grochulski, and J. Sygusch, *Covalent intermediate trapped in 2-keto-3-deoxy-6-phosphogluconate (KDPG) aldolase structure at 1.95 Å resolution*, *Proc Natl Acad Sci USA*, Vol. 98, Issue 7, p. 3679-84, Beamline(s) X8C, March 27, 2001. [PR/P]

T. Clarke, S. Ku, D. Dougan, H. Vogel, and L. Tari, *The structure of the ferric siderophore binding protein FhuD complexed with gallicchrome*, *Nat. Struct. Biol.*, Vol. 7, Issue 4, p. 287-291, Beamline(s) X8C, 2000. [PR/P]

N. Concha, B. Rasmussen, K. Bush, and O. Herzberg, *Crystal structures of the cadmium- and mercury-substituted metallo-beta-lactamase from *Bacteroides fragilis**, *Protein Sci.*, Vol. 6, p. 2671-2676, Beamline(s) X8C, 12 1997. [PR]

P. Dunten, U. Kammlott, R. Crowther, W. Levin, L. Foley, P. Wang, and R. Palermo, *X-ray structure of a novel matrix metalloproteinase inhibitor complexed to stromelysin*, *Protein Sci.*, Vol. 10, p. 923-926, Beamline(s) X8C, May 2001. [PR]

J. Head, S. Inouye, K. Teranishi, and O. Shimomura, *The crystal structure of the photoprotein aequorin at 2.3 Å resolution*, *Nature*, Vol. 405, p. 372-376, Beamline(s) X8C, May 18, 2000. [PR/P]

J. Horton, K. Sawada, M. Nishibori, X. Zhang, and X. Cheng, *Two Polymorphic Forms of Human Histamine Methyltransferase: Structural, Thermal, and Kinetic Comparisons*, *Structure*, Vol. 9, p. 837-849, Beamline(s) X8C and X26C, September 17, 2001. [PR/P]

J. Jia, S. Tarabykina, C. Hansen, M. Berchtold, and M. Cygler, *Structure of apoptosis-linked protein ALG-2: Insights into Ca(2+)-induced changes in penta-ER-hand proteins*, *Structure Fold. Des.*, Vol. 9, Issue 4, p. 267-75, Beamline(s) X8C, April 15, 2001. [PR]

H. Juergen-Sass, G. Bueldt, R. Gessenich, D. Hehn, D. Neff, R. Schlesinger, J. berendzen, and P. Ormos, *Structural alterations for proton translocation in the M state of wild-type bacteriorhodopsin*, *Nature*, Vol. 406, p. 649-653, Beamline(s) X8C, August 10, 2000. [PR/P]

K. Kim, K. Min, and S. Suh, *Crystal structure of the ribosome recycling factor from Escherichia coli*, *EMBO J.*, Vol. 19, Issue 10, p. 2362-70, Beamline(s) X8C, May 15, 2000. [PR/P]

M. Kimber and E. Pai, *The active site architecture of Pisum sativum beta-carbonic anhydrase is a mirror image of that of alpha-carbonic anhydrases*, *EMBO J.*, Vol. 19, Issue 7, p. 1407-18, Beamline(s) X8C, April 3, 2000. [PR/P]

D. Kohls, T. Sulea, E. Purisima, R. MacKenzie, and A. Vrielink, *The crystal structure of the formiminotransferase domain of formiminotransferase-Cyclodeaminase: Implications for substrate channeling in a bifunctional enzyme*, *Structure*, Vol. 8, p. 35-46, Beamline(s) X8C, 2000. [PR/P]

R. Landry, A. Klimowicz, S. Lavictoire, S. Borisova, D. Kottachchi, I. Lorimer, and S. Evans, *Antibody Recognition of a Conformational Epitope in a Peptide Antigen: Fv-peptide Complex of an Antibody Fragment Specific for the Mutant EGFR Receptor, EGFRvII*, *J. Mol. Biol.*, Vol. 308, Issue 5, p. 883-893, Beamline(s) X8C, May 14, 2001. [PR]

J. Lee, C. Chang, H. Song, J. Moon, J. Yang, H. Kim, S. Kwon, and S. Suh, *Crystal structure of NAD(+)-dependent DNA ligase: modular architecture and functional implications*, *EMBO J.*, Vol. 19, Issue 5, p. 1119-29, Beamline(s) X8C, March 1, 2000. [PR/P]

J. Lee, K. Cornell, M. Riscoe, and P. Howell, *Structure of *E. coli* MTA/AdoHcy nucleosidase reveals similarity to the purine nucleoside phosphorylases*, *Structure*, Vol. 9, Issue 10, p. 941-953, Beamline(s) X8C, October 3, 2001. [PR/P]

D. Lim, S. Golovan, C. Forsberg, and Z. Jia, *Crystal structures of *Escherichia coli* phytase and its complex with phytate*, *Nat. Struct. Biol.*, Vol. 7, Issue 2, p. 108-113, Beamline(s) X8C, February 2000. [PR/P]

Y. Liu, G. Gotte, M. Libonati, and D. Eisenberg, *A domain-swapped RNase A dimer with implications for amyloid formation*, *Nat. Struct. Biol.*, Vol. 8, Issue 3, p. 211-214, Beamline(s) X8C, March 2001. [PR/P]

P. Loll, *Phasing from the anomalous scattering of chlorine: Application to the vancomycin glycan*, *Acta Cryst. D*, Vol. 57, p. 977-980, Beamline(s) X8C, 2001. [PR]

Y. Mo, B. Veassen, K. Johnston, and R. Marmorstein, *Elk-1/DNA structure reveals how DNA-distal residues effect ETS-domain recognition of DNA*, *Nat. Struct. Biol.*, Vol. 7, p. 292-297, Beamline(s) X8C, 2000. [PR/P]

C. Mura, D. Cascio, M. Sawaya, and D. Eisenberg, *The crystal structure of a heptameric archaeal Sm protein: Implications for the eukaryotic snRNP core*, *Proc Natl Acad Sci USA*, Vol. 98, Issue 10, p. 5532-5537, Beamline(s) X8C, 2001. [PR/P]

P. Pawelek, J. Cheah, R. Coulombe, P. Macheroux, S. Ghislain, and A. Vrielink, *The structure of L-amino acid oxidase reveals the substrate trajectory into an enantiomerically conserved active site*, *EMBO J.*, Vol. 19, p. 4204-4215, Beamline(s) X8C, 2000. [PR/P]

J. Rojas, *Crystal Structural Analysis of a Histone Acetyltransferase from Tetrahymena*, Ph.D. Thesis, University of Pennsylvania, Pennsylvania, USA, Beamline(s) X8C, 2000.

V. Sauvé and J. Sygusch, *Crystallization and preliminary X-ray analysis of native and selenomethionine fructose-1,6-bisphosphate aldolase from *Thermus aquaticus**, *Acta Cryst. D*, Vol. 57, Issue 2, p. 310-313, Beamline(s) X8C, Feb 2001. [PR]

- E. Toth and T. Yeates, *The structure of adenylosuccinate lyase, an enzyme with dual activity in the de novo purine biosynthetic pathway*, *Structure Fold. Des.*, Vol. 8, Issue 2, p. 163-74, Beamline(s) X8C, February 2000. [PR]
- F. Vallee, F. Lipari, B. Sleno, A. Herscovics, and P. Howell, *Crystal structure of a class I alpha1,2-mannosidase involved in N-glycan processing and endoplasmic reticulum quality control*, *EMBO J.*, Vol. 19, Issue 4, p. 581-8, Beamline(s) X8C, February 15, 2000. [PR/P]
- D. Worthylake, H. Wang, S. Yoo, W. Sundquist, and C. Hill, *Structures of the NIV-1 Capsid Protein dimerization domain at 2.5 Å resolution*, *Acta Cryst. D*, Vol. D55, p. 85-92, Beamline(s) X8C, 1999. [PR]

### Beamline X9A

- S. Burley, *An Overview of Structural Genomics*, *Nat. Struct. Biol.*, Vol. 7, p. 932-934, Beamline(s) X9A, 2000. [PR/P]
- R. Deo, N. Sonenberg, and S. Burley, *X-Ray Structure of the Human Hyperplastic Discs Protein: An Ortholog of the C-Terminal Domain of Poly(A) Binding Protein*, *Proc Natl Acad Sci USA*, Vol. 98, p. 4414-4419, Beamline(s) X9A, 2001. [PR/P]
- C. Groft, R. Beckmann, A. Sali, and S. Burley, *Crystal Structure of Ribosome Anti-Association Factor eIF6*, *Nat. Struct. Biol.*, Vol. 7, p. 1156-1164, Beamline(s) X9A, 2000. [PR/P]
- K. Kamada, F. Shu, H. Chen, S. Malik, G. Stelzer, R. Roeder, M. Meisterernst, and S. Burley, *Crystal Structure of Negative Cofactor 2 Recognizing the TBP-DNA Transcription Complex*, *Cell*, Vol. 106, p. 71-81, Beamline(s) X9A, 2001. [PR/P]
- A. Roll-Mecak, C. Cao, T. Dever, and S. Burley, *X-Ray Structures of the Universal Translation Initiation Factor IF2/eIF5B: Conformational Changes on GDP and GTP Binding*, *Cell*, Vol. 103, p. 781-792, Beamline(s) X9A, 2000. [PR/P]
- i. Sagi, Y. Hochman, G. Bunker, S. Carmeli, and C. Carmeli, *The penta-coordinated vanadium formed on binding of ADP-vanadate-Mg(II) to CF1-ATPase functions as a transition-state inhibitor*, *J. Synch. Rad.*, Vol. 6, p. 409-410, Beamline(s) X9A, 1999. [PR]
- J. Schwartz, X. Zhang, A. Fedorov, S. Nathenson, and S. Almo, *Structural Basis for Costimulation by the Human CTLA-4/B7-2 Complex*, *Nature*, Vol. 410, p. 604-608, Beamline(s) X9A, 2001. [PR/P]
- S. Silverman, M. Deras, S. Woodson, S. Scaringe, and T. Cech, *Multiple folding pathways for the P4-P6 RNA domain*, *Biochemistry*, Vol. 39, p. 12465-12475, Beamline(s) X9A and X28C, 2000. [PR]

### Beamline X9B

- T. Allison, C. Winter, J. Fournier, M. Bonneville, and D. Garboczi, *Structure of a human gamma d T-cell antigen receptor*, *Nature*, Vol. 411, Issue 6839, p. 820-4, Beamline(s) X9B, June 14, 2001. [PR/P]
- J. Appgar, Y. Tseng, E. Fedorov, M. Herwig, S. Almo, and D. Wirtz, *Multiple-Particle Tracking Measurements of Heterogeneities in Solutions of Actin Filaments and Actin Bundles*, *Biophys. J.*, Vol. 79, p. 1095-1106, Beamline(s) X9B, 2000. [PR]
- J. Boyington, S. Motyka, P. Schuck, A. Brooks, and P. Sun, *Crystal structure of an NK cell immunoglobulin-like receptor i complex with its class I MHC ligand*, *Nature*, Vol. 405, p. 537-543, Beamline(s) X9B, June 1, 2000. [PR/P]

- E. Burke, N. Mahoney, S. Almo, and S. Barik, *Profilin is Required for Optimal Actin-Dependent Transcription of Respiratory Syncytial Virus Genome RNA*, *J. Virology*, Vol. 74, p. 669-675, Beamline(s) X9B, 2000. [PR]
- C. Chang, A. Mooser, A. Plückthun, and A. Wlodawer, *Crystal Structure of the Dimeric C-terminal Domain of TonB*, *J. Biol. Chem.*, Vol. 276, Issue 29, p. 27535-27540, Beamline(s) X9B, Jul 20, 2001. [PR]
- Z. Dauter and M. Dauter, *Entering a New Phase: Using Solvent Halide Ions in Protein Structure Determination, Structure*, Vol. 9, p. R21-R26, Beamline(s) X9B, 2001. [PR/P]
- Z. Dauter, M. Li, and A. Wlodawer, *Practical Experience with the use of Halides for Phasing Macromolecular Structures: A Powerful Tool for Structural Genomics*, *Acta Cryst. D*, Vol. 57, p. 239-249, Beamline(s) X9B, 2001. [PR]
- G. Davidson, S. Clugston, J. Honek, and M. Maroney, *An XAS Investigation of Product and Inhibitor Complexes of Ni-containing Gxl from e. coli: Mechanistic Implications*, *Biochemistry*, Vol. 40, Issue 15, p. 4569-4582, Beamline(s) X9B, 2001. [PR]
- Y. Dovedjiev, Z. Dauter, S. Kuznetsov, T. Jones, and Z. Derewenda, *Crystal structure of the human acyl protein thioesterase I from a single X-ray data set to 1.5 Å*, *Structure Fold. Des.*, Vol. 8, Issue 11, p. 1137-46, Beamline(s) X9B, November 15, 2000. [PR]
- A. Evdokimov, D. Anderson, K. Routzahn, and D. Waugh, *Overproduction, Purification, Crystallization and Preliminary X-ray Diffraction Analysis of YopM, an Essential Virulence Factor Extruded by the Plague Bacterium Yersinia Pestis*, *Acta Cryst. D*, Vol. 56, p. 1676-1679, Beamline(s) X9B, 2000. [PR]
- A. Fedorov, W. Shi, G. Kicska, E. Fedorov, P. Tyler, R. Furneaux, J. Hanson, G. Gainsford, J. Larese, and et al, *Transition State Structure of Purine Nucleoside Phosphorylase and Principles of Atomic Motion in Enzymatic Catalysis*, *Biochemistry*, Vol. 40, p. 853-860, Beamline(s) X9B, 2001. [PR]
- Y. Ho, L. Burden, and J. Hurley, *Structure of the GAF domain, a ubiquitous signaling motif and a new class of cyclic GMP receptor*, *EMBO J.*, Vol. 19, Issue 20, p. 5288-99, Beamline(s) X9B, October 16, 2000. [PR/P]
- A. Hofmann, A. Zdanov, P. Genschik, S. Ruvinov, W. Filipowicz, and A. Wlodawer, *Structure and mechanism of activity of the cyclic phosphodiesterase of Appr>p, a product of the tRNA splicing reaction*, *EMBO J.*, Vol. 19, Issue 22, p. 6207-17, Beamline(s) X9B, November 15, 2000. [PR/P]
- D. Hoover, K. Rajashankar, R. Blumenthal, A. Puri, J. Oppenheim, O. Chertov, and J. Lubkowski, *The Structure of Human Beta-Defensin-2 Shows Evidence of Higher Order Oligomerization*, *J. Biol. Chem.*, Vol. 275, p. 32911-32918, Beamline(s) X9B, 2000. [PR]
- M. Junop, M. Modesti, A. Guarne, R. Ghirlando, M. Gellert, and W. Yang, *Crystal structure of the XrcC DNA repair protein and implications for end joining*, *EMBO J.*, Vol. 19, Issue 22, p. 5962-70, Beamline(s) X9B, November 15, 2000. [PR/P]
- O. Kleifeld, A. Frenkel, and I. Sagi, *Time-dependent XAS studies of trapped enzyme-substrate complexes of alcohol dehydrogenase from Thermoanaerobacter brockii*, *J. Synch. Rad.*, Vol. 8, p. 978-980, Beamline(s) X9B, 2001. [PR]
- O. Kleifeld, L. Kotra, D. Gervasi, S. Brown, M. Bernardo, R. Fridman, S. Mobashery, and I. Sagi, *X-ray absorption studies of human matrix metalloproteinase-2 (MMP-2) bound to a highly selective mechanism-based inhibitor. comparison with the latent and active forms of the enzyme*, *J. Biol. Chem.*, Vol. 276, Issue 20, p. 17125-31, Beamline(s) X9B, May 18, 2001. [PR]

- O. Kleifeld, P. Van der Steen, A. Frenkel, F. Cheng, H. Jiang, G. Opdenakker, and I. Sagi, *Structural Characterization of the Catalytic Active Site in the Latent and Active Natural Gelatinase B from Human Neutrophils*, *J. Biol. Chem.*, Vol. 275, Issue 44, p. 34335-34343, Beamline(s) X9B, November 3, 2000. [PR]
- J. Li, U. Derewenda, Z. Dauter, S. Smith, and Z. Derewenda, *Crystal Structure of the Escherichia Coli Thioesterase II, A Homolog of the Human Nef Binding Enzyme*, *Nat. Struct. Biol.*, Vol. 7, p. 555-559, Beamline(s) X9B, 2000. [PR/P]
- Y. Lin, V. Dotsch, T. Wintner, K. Pearson, L. Myers, J. Penner-Hahn, G. Verdine, and G. Wagner, *Structural Basis for the Functional Switch of the E. Coli Ada Protein*, *Biochemistry*, Vol. 40, p. 4261-4271, Beamline(s) X9B, 2001. [PR]
- K. Longenecker, S. Garrard, P. Sheffield, and Z. Derewenda, *Protein crystallization by rational mutagenesis of surface residues: Lys to Ala mutations promote crystallization of RhoGDI*, *Acta Cryst. D*, Vol. 57, p. 679-688, Beamline(s) X9B, May 2001. [PR]
- K. Longenecker, M. Lewis, H. Chikumi, J. Gutkind, and Z. Derewenda, *Structure of the RGS-like Domain from PDZ-RhoGEF: Linking Heterotrimeric G Protein-Coupled Signaling to Rho GTPases*, *Structure*, Vol. 9, p. 559, Beamline(s) X9B, 2001. [PR/P]
- K. Longenecker, P. Read, U. Derewenda, Z. Dauter, X. Liu, S. Garrard, L. Walker, A. Somlyo, R. Nakamoto, et al., *How RhoGDI binds Rho*, *Acta Cryst. D*, Vol. 55, p. 1503-1515, Beamline(s) X9B, September 1999. [PR]
- K. Longenecker, B. Zhang, U. Derewenda, P. Sheffield, Z. Dauter, J. Parsons, Y. Zheng, and Z. Derewenda, *Structure of the BH Domain from Graf and its Implications for Rho GTPase Recognition*, *J. Biol. Chem.*, Vol. 275, p. 38605-38610, Beamline(s) X9B, 2000. [PR]
- J. Lubkowski and A. Wlodawer, *Deamers observed in the crystals of bovine pancreatic trypsin inhibitor*, *Acta Cryst. D*, Vol. D55, p. 335-337, Beamline(s) X9B, 1999. [PR]
- N. Mahoney, V. Rastogi, S. Cahill, M. Girvin, and S. Almo, *A New Method to Determine the Binding Orientation of Proline-Rich Ligands in Solution: Polarity of the Profilin-Ligand Interaction*, *J. Am. Chem. Soc.*, Vol. 122, p. 7851-7852, Beamline(s) X9B, 2000. [PR]
- M. Maroney and P. Bryngelson, *Spectroscopic and Model Studies of the Ni-Fe Hydrogenase Reaction Mechanism*, *J. Biol. Inorg. Chem.*, Vol. 6, p. 453-459, Beamline(s) X9B, 2001. [PR]
- A. Melian, G. Watts, A. Shamshiev, G. DeLibero, A. Clatworthy, M. Vincent, M. Brenner, S. Behar, K. Niazi, and et al, *Molecular Recognition of Human CD1b Antigen Complexes: Evidence for a Common Pattern of Interaction with AlphaBeta TCR's*, *J. Immunol.*, Vol. 165, p. 4494-4504, Beamline(s) X9B, 2000. [PR]
- S. Misra and J. Hurley, *Crystal structure of a phosphatidylinositol 3-phosphate-specific membrane-targeting motif, the FYVE domain of Vps27p*, *Cell*, Vol. 97, p. 657-666, Beamline(s) X9B, May 1999. [PR/P]
- G. Obmolova, C. Ban, P. Hsieh, and W. Yang, *Crystal Structures of Mismatch Repair Protein MutS and its Complex with a Substrate DNA*, *Nature*, Vol. 407, p. 703-710, Beamline(s) X9B and X4A, October 2, 2000. [PR/P]
- D. Ostrov, W. Shi, J. Schwartz, S. Almo, and S. Nathenson, *Structure of Murine CTLA-4 and its Role in T Cell Responsiveness*, *Science*, Vol. 290, p. 81681-81689, Beamline(s) X9B, 2000. [PR/P]
- K. Padden, J. Krebs, K. Trafford, G. Yap, A. Rheingold, A. Borovik, and R. Scarrow, *Probing the Structure of Immobilized Metal Sites in Porous Organic Hosts by X-ray Absorption Spectroscopy*, *Chem. Mater.*, Vol. 13, Issue 11, p. 4305-4313, Beamline(s) X9B, November 19, 2001. [PR]
- L. Pedersen, K. Tsuchida, H. Kitagawa, K. Sugahara, T. Darden, and M. Negishi, *Heparan/Chondroitin Sulfate Biosynthesis. Structure and Mechanism of Human Glucuronyltransferase I*, *J. Biol. Chem.*, Vol. 275, p. 34580-34585, Beamline(s) X9B, 2000. [PR]
- B. Ramakrishnan and P. Qasba, *Crystal structure of Lactose synthase reveals a large conformational change in its catalytic component, the beta1,4-galactosyltransferase*, *J. Mol. Biol.*, Vol. 310, p. 205-218, Beamline(s) X9B, June 29, 2000. [PR]
- B. Ramakrishnan, P. Shah, and P. Qasba, *a-lactalbumin stimulates milk b1,4galactosyltransferase I to transfer glucose from UDP-Glc to N-acetylglucosamine: Crystal structure of b4Gal-t1.LA complex with UDP-Glc*, *J. Biol. Chem.*, Vol. 276, Issue 40, p. 37665-37671, Beamline(s) X9B, October 5, 2001. [PR]
- R. Rustandi, K. Valley, O. Varlamova, M. Klein, S. Almo, A. Bresnick, and D. Weber, *1H, 13C, 15N NMR Sequence-Specific Resonance Assignments for Human Apo-Mts1 (S100A4)*, *J. Biomol. NMR*, Vol. 19, p. 381-382, Beamline(s) X9B, 2001. [PR]
- M. Sarmiento, Y. Puius, S. Vetter, Y. Keng, L. Wu, Y. Zhao, D. Lawrence, S. Almo, and Z. Zhang, *Structural Basis of Plasticity in Protein Tyrosine Phosphatase 1b Substrate Recognition*, *Biochemistry*, Vol. 39, p. 8171-8179, Beamline(s) X9B, 2000. [PR]
- T. Umland, K. Taylor, S. Rhee, R. Wickner, and D. Davies, *The Crystal Structure of the Nitrogen Regulation Fragment of the Yeast Prion Protein Ure2p*, *Proc Natl Acad Sci USA*, Vol. 98, Issue 4, p. 1459-1464, Beamline(s) X9B, 2001. [PR/P]
- A. Wolven, L. Belmont, N. Mahoney, S. Almo, and D. Drubin, *In Vivo Importance of Actin Nucleotide Exchange Catalyzed by Profilin*, *J. Cell Biol.*, Vol. 150, p. 895-904, Beamline(s) X9B, 2000. [PR]
- F. Yang, Z. Dauter, and A. Wlodawer, *Effects of Crystal Twinning on the Ability to Solve a Macromolecular Structure Using Multi-Wavelength Anomalous Diffraction*, *Acta Cryst. D*, Vol. 56, p. 959-964, Beamline(s) X9B, 2000. [PR]
- Y. Zhang, C. Boesen, S. Radaev, A. Brooks, W. Friedman, C. Sautes-Fridman, and P. Sun, *Crystal Structure of the Extracellular Domain of a Human Fc Gamma RIII, Immunity*, Vol. 13, p. 387-395, Beamline(s) X9B, 2000. [PR]

## Beamline X10A

- T. Bellini, L. Radzhovsky, J. Toner, and N. Clark, *Universality And Scaling In The Disordering Of A Smectic Liquid Crystal*, *Science*, Vol. 294, p. 1074-1079, Beamline(s) X10A, November 2, 2001. [PR/P]
- W. Jang, C. Park, K. Kim, M. Glaser, and N. Clark, *Evidence From Infrared Dichroism, X-Ray Diffraction, And Atomistic Computer Simulation For 'Zig-Zag' Molecular Shape In Tilted Smectic Liquid Crystals*, *Phys. Rev. E*, Vol. 64, p. 051712, Beamline(s) X10A, October 25, 2001. [PR]
- M. Radcliffe, M. Brostrom, K. Epstein, A. Rappaport, B. Thomas, R. Shao, and N. Clark, *Smectic A And C Materials With Novel Director Tilt And Layer Thickness Behavior*, *Liq. Cryst.*, Vol. 26, p. 789-794, Beamline(s) X10A, 1999. [PR]
- D. Walba, L. Xiao, P. Keller, R. Shao, D. Link, and N. Clark, *Ferroelectric Liquid Crystals For Second Order Nonlinear Optics*, *Pure Appl. Chem.*, Vol. 71, Issue 11, p. 2117-2123, Beamline(s) X10A, November 1999. [PR]
- W. Zhou, J. Kornfield, V. Ugaz, W. Burghardt, D. Link, and N. Clark, *Dynamics And Shear Orientation Behavior Of A Main-Chain Thermotropic Liquid Crystalline Polymer*, *Macromolecules*, Vol. 32, p. 5581-5593, Beamline(s) X10A, July 1999. [PR]

## Beamline X10B

- R. Lammertink, M. Hempenius, G. Vancso, K. Shin, M. Rafailovich, and J. Sokolov, *Morphology and Surface Relief Structures of Asymmetric Poly(styrene-block-ferrocenylsilane) Thin Films*, *Macromolecules*, Vol. 34, p. 942, Beamline(s) X10B, 2001. [PR]
- F. Schreiber, *Structure and growth of self-assembling monolayers*, *Prog. Surf. Sci.*, Vol. 65, p. 151-256, Beamline(s) X10B, 2000. [PR]
- V. Shapovalov, V. Zaitsev, Y. Strzhemechny, F. Choudhery, W. Zhao, S. Schwarz, S. Ge, K. Shin, M. Rafailovich, and et al, *Nanostructure Formation in Spin Cast Polystyrene Films*, *Polym. Int.*, Vol. 49, Issue 5, p. 432-436, Beamline(s) X10B, 2000. [PR]
- K. Shin, *Nanostructured Polymer Thin Films*, Ph.D. Thesis, SUNY @ Stony Brook, NY, USA, Beamline(s) X10B and X22B, 2000.
- K. Shin, X. Hu, X. Zheng, M. Rafailovich, J. Sokolov, V. Zaitsev, and S. Schwarz, *Silicon Oxide Surface as a Substrate for Polymer Thin Films*, *Macromolecules*, Vol. 34, p. 4993, Beamline(s) X10B, 2001. [PR]
- K. Shin, Y. Pu, M. Rafailovich, J. Sokolov, O. Seeck, M. Tolan, and S. Sinha, *Correlated Surfaces of Free standing Polystyrene Thin Films*, *Macromolecules*, *Macromolecules*, Vol. 34, p. 5620, Beamline(s) X10B, 2001. [PR]

## Beamline X10C

- D. Chidambaram, C. Clayton, and G. Halada, *Effect of Surface Pretreatments on Chromate Conversion Coatings*, *199th meeting of the Electrochemical Society*, Vol. 2001, Issue 1, p. 167, sponsored by Electrochemical Society, Pennington, NJ, USA, Beamline(s) X10C, 2001.
- P. Wilson, N. Laycock, M. Ryan, D. Crouch, and H. Isaacs, *Transpassive Corrosion Of Stainless Steels And Nickel Base Alloys*, *Corrosion and Prevention 2000*, sponsored by Australasian Corrosion Association, Melbourne, Victoria, Australia, Beamline(s) X10C, BNL Report No. N/A, 2000.

## Beamline X11A

- T. Alcacio, D. Hesterberg, J. Chou, J. Martin, S. Beauchemin, and D. Sayers, *Molecular scale characteristics of Cu(II) bonding in goethite-humate complexes*, *Geochim. Cosmochim. Acta*, Vol. 65, p. 1355-1366, Beamline(s) X11A, 2001. [PR]
- Y. Arai, E. Elzinga, and D. Sparks, *X-ray Absorption Spectroscopic Investigation of Arsenite and Arsenate Adsorption at the Aluminum Oxide-Water Interface*, *J. Colloid Interface Sci.*, Vol. 235, p. 80-88, Beamline(s) X11A, 2000. [PR]
- A. Argo, J. Goellner, B. Phillips, G. Panjabi, and B. Gates, *Reactivity of Site-Isolated Metal Clusters: Propylidyne on gamma-Al<sub>2</sub>O<sub>3</sub>-Supported Ir<sub>4</sub>*, *J. Am. Chem. Soc.*, Vol. 123, p. 2275-2283, Beamline(s) X11A, 2001. [PR]
- S. Beauchemin, D. Hesterberg, K. Pandya, J. Zinck, and J. Kwong, *XAS spectroscopic characterization of zinc in neutralization sludges from mining industries*, *6th International Conference on Biogeochemistry of Trace Elements*, p. 64, sponsored by OntarioPower Generation, University of Guelph, Guelph, Ontario, Canada, Beamline(s) X11A, 2001.
- L. Croguennec, C. Pouillerie, A. Mansour, and C. Delmas, *Structural characterization of the highly deintercalated Li<sub>x</sub>Ni<sub>1.02</sub>O<sub>2</sub> phases (x<0.30)*, *J. Mater. Sci. Lett.*, Vol. 11, p. 131-141, Beamline(s) X11A, 2001. [PR]

R. Daehn, *Determination of Ni(II) and Th(IV) Sorption Mechanisms on Clay Mineral Surfaces: A Combined Macroscopic, Spectroscopic, and Microscopic Approach*, Ph.D. Thesis, Swiss Federal Institute of Technology Zürich (ETH), Zürich, Switzerland, Beamline(s) X11A, 2001.

- R. Dähn, A. Scheidegger, A. Manceau, M. Schlegel, B. Baeyens, and M. Bradbury, *Ni clay neoformation on montmorillonite surface*, *J. Synch. Rad.*, Vol. 8, Issue 2, p. 533-535, Beamline(s) X11A, 2001. [PR]

- W. Dong, A. Mansour, and B. Dunn, *Structural and Electrochemical Properties of amorphous and crystalline molybdenum oxide aerogels*, *Solid State Ionics*, Vol. 144, p. 31-40, Beamline(s) X11A, 2001. [PR]

- S. Eibl, B. Gates, and H. Knoeziinger, *Structure of WO<sub>x</sub>/TiO<sub>2</sub> Catalysts Prepared from Hydrous Titanium Oxide Hydroxide: Influence of Preparation Parameters*, *Langmuir*, Vol. 17, p. 107-115, Beamline(s) X11A, 2001. [PR]

- E. Elzinga, D. Peak, and D. Sparks, *Spectroscopic Studies of Pb(II)-Sulfate Interactions at the Goethite-Water Interface*, *Geochim. Cosmochim. Acta*, Vol. 65, p. 2219-2230, Beamline(s) X11A, 2001. [PR]

- E. Elzinga and D. Sparks, *Reaction Condition Effects on Nickel Sorption Mechanisms in Illite-Water Suspensions*, *J. Colloid Interface Sci.*, Vol. 65, p. 94-101, Beamline(s) X11A, 2001. [PR]

- D. Haskel, E. Stern, and F. Dogan, *Role of Sr dopants in the inhomogeneous ground state of La<sub>2-x</sub>Sr(x)CuO<sub>4</sub>. Phase transitions and self organization in electronic and molecular networks*, Series Fundamental Materials Research, M.F. Thorpe and J.C. Phillips (Ed.) Kluwer Academic/Plenum Publishers, New York, NY, USA, p. 20, Beamline(s) X11A, 2001.

- D. Haskel, E. Stern, F. Dogan, and A. Moodenbaugh, *XAFS study of the low temperature tetragonal phase of La<sub>2-x</sub>Ba(x)CuO<sub>4</sub>: Disorder, stripes and T(c) suppression at x=0.125*, *Phys. Rev. B*, Vol. 61, Issue 10, p. 7055-7076, Beamline(s) X11A, 2000. [PR]

- D. Haskel, E. Stern, F. Dogan, and A. Moodenbaugh, *Dopant structural distortions in high-temperature superconductors: an active or a passive role?*, (invited paper), *The 11th International Conference on x-ray absorption fine structure*, Vol. 8, p. 186-190, Journal of Synchrotron Radiation, Beamline(s) X11A, 2001.

- D. Haskel, E. Stern, F. Dogan, and V. Polinger, *Suppression of Superconductivity in La<sub>1.85</sub>Sr<sub>0.15</sub>Cu<sub>1-y</sub>Ni(y)O<sub>4</sub>: The relevance of local lattice distortions*, *International symposium on physics in local lattice distortions*, Vol. 554, p. 154-168, American Institute of Physics, New York, NY, USA, Beamline(s) X11A, 2000.

- D. Haskel, E. Stern, V. Polinger, and F. Dogan, *Ni induced local distortions in LaSrCuNiO and their relevance to T<sub>c</sub> suppression: An angular resolved XAFS study*, *Phys. Rev. B: Condens. Matter*, Vol. 64, p. 104510-1-104510-10, Beamline(s) X11A, 2001. [PR]

- D. Hesterberg, J. Chou, K. Hutchison, and D. Sayers, *Bonding of Hg(II) to Reduced Organic Sulfur in Humic Acid as Affected by S/H Ratio*, *Environ. Sci. Tech.*, Vol. 35, p. 2741-2745, Beamline(s) X11A and X19A, 2001. [PR]

- A. Kropf, B. Bunker, and J. Furdyna, *XAFS studies of interfaces in MnSe/ZnTe superlattices*, *J. Synch. Rad.*, Vol. 6, p. 370-372, Beamline(s) X11A and X23A2, 1999. [PR]

- A. Mansour, G. Cibin, A. Marcelli, T. Sevastyanova, G. Yalovega, and A. Soldatov, *Local atomic and electronic structure of A<sub>190</sub>FexCe<sub>10-x</sub> alloys: XAFS analysis*, *J. Synch. Rad.*, Vol. 8, p. 809-811, Beamline(s) X11A, 2001. [PR]

- A. Mansour, L. Croguennec, G. Prado, and C. Delmas, *In situ XAS study of Li<sub>x</sub>Ni<sub>0.7</sub>Fe<sub>0.15</sub>Co<sub>0.15</sub>O<sub>2</sub> cathode material*, *J. Synch. Rad.*, Vol. 8, p. 866-868, Beamline(s) X11A, 2001. [PR]

- C. Matocha, E. Elzinga, and D. Sparks, *Reactivity of Pb(II) at the Mn(III,IV) (Oxyhydr)Oxide-Water Interface*, *Eur. Phys. J. D*, Vol. 35, p. 2967 -2972, Beamline(s) X11A, 2001. [PR]
- J. Odzak, A. Argo, F. Lai, B. Gates, K. Pandya, and L. Feraria, *A Flow-Through X-Ray Absorption Spectroscopy Cell for Characterization of Powder Catalysts in the Working State*, *Rev. Sci. Instrum.*, Vol. 72, Issue 10, p. 3943-3945, Beamline(s) X11A, October 2001. [PR]
- J. Odzak, A. Argo, F. Lai, B. Gates, K. Pandya, and L. Feraria, *Reactivity of Site-Isolated Metal Clusters: Propylidyne on gamma-Al<sub>2</sub>O<sub>3</sub>-Supported Ir4*, *Rev. Sci. Instrum.*, Vol. 72, p. 3943-3945, Beamline(s) X11A, 2001. [PR]
- E. O'Reilly, D. Strawn, and D. Sparks, *Residence Time Effects on Arsenate Adsorption/Desorption Mechanisms on Goethite*, *Eur. Phys. J. D*, Vol. 55, p. 67-77, Beamline(s) X11A, 2001. [PR]
- D. Peak, E. Elzinga, and D. Sparks, *Understanding Sulfate Adsorption Mechanisms on Iron(III) Oxides and Hydroxides: Results from ATR-FTIR Spectroscopy, Heavy Metals Release in Soils*, H. M. Selim and D. L. Sparks (Ed.) Lewis Publishers, Boca Raton, p. 167-190, Beamline(s) X11A, 2000.
- D. Pease, M. Daniel, J. Budnick, B. Taylor, A. Frenkel, K. Pandya, I. Grigorieva, and A. Antonov, *Extension of a tuned log spiral of revolution fluorescence XAFS detector, designed for optimal detection of a particular element Z, to XAFS of elements other than Z*, *J. Synch. Rad.*, Vol. 8, p. 336-338, Beamline(s) X11A and X16C, 2001. [PR]
- D. Pease, A. Fasihuddin, M. Daniel, and I. Budnick, *Method of linearizing the 3d L3/L2 white line ratio as a function of magnetic moment*, *Ultramicroscopy*, Vol. 88, Issue 1, p. 1-16, Beamline(s) X11A and U1A, June 2001. [PR]
- W. Platow, D. Wood, J. Burnette, R. Nemanich, and D. Sayers, *XAFS studies of the formation of cobalt silicide on (sqrt(3) by sqrt (3) SiC(0001)*, *J. Synch. Rad.*, Vol. 8, p. 475-477, Beamline(s) X11A, 2001. [PR]
- A. Porto, B. Boyanov, D. Sayers, and R. Nemanich, *Cobalt silicide formation on 6H silicon carbide*, *J. Synch. Rad.*, Vol. 6, p. 188-189, Beamline(s) X11A, 1999. [PR]
- R. Reeder, M. Nugent, and R. Pabalan, *Local structure of uranium(VI) sorbed on clinoptilolite and montmorillonite, Water-Rock Interaction*, R. Cidu (Ed.) Balkema, Lisse, The Netherlands, p. 423-426, Beamline(s) X11A, 2001.
- K. Scheckel and J. Ryan, *Effect of Aging on the Formation and Dissolution of Pyromorphite*, (invited paper), *222nd National American Chemical Society Meeting*, Vol. 1, Issue 1, p. 271, sponsored by ACS, ACS Symposium Series, San Diego, CA, Beamline(s) X11A, 2001.
- K. Scheckel and D. Sparks, *Temperature Effects on Nickel Sorption Kinetics at the Mineral-Water Interface*, *Eur. Phys. J. D*, Vol. 65, p. 685-694, Beamline(s) X11A, 2001. [PR]
- K. Scheckel and D. Sparks, *Dissolution Kinetics of Nickel Surface Precipitates on Clay Mineral and Oxide Surfaces*, *Soil Sci. Soc. Am. J.*, Vol. 65, p. 685-694, Beamline(s) X11A, 2001. [PR]
- A. Scheidegger, E. Wieland, A. Scheinost, R. Dahn, J. Tits, and P. Spieler, *Ni phases formed in cement and cement systems under highly alkaline conditions: an XAFS study*, *J. Synch. Rad.*, Vol. 8, p. 916-918, Beamline(s) X11A, 2001. [PR]
- A. Scheidegger, E. Wieland, A. Scheinost, R. Dähn, and P. Spieler, *Spectroscopic evidence for the formation of layered Ni-Al double hydroxides in cement*, *Environ. Sci. Tech.*, Vol. 34, p. 4545-4548, Beamline(s) X11A, 2000. [PR]
- A. Scheinost, S. Abend, K. Pandya, and D. Sparks, *Kinetic Controls on Cu and Pb Sorption by Ferrihydrite*, *Environ. Sci. Tech.*, Vol. 35, p. 1090 -1096, Beamline(s) X11A, 2001. [PR]
- A. Scheinost, H. Stanjek, D. Schulze, U. Gasser, and D. Sparks, *Structural environment and oxidation state of Mn in goethite-groutite solid-solutions*, *Am. Mineral.*, Vol. 86, p. 139-146, Beamline(s) X11A, January 2001. [PR]
- U. Skyllberg, K. Xia, P. Bloom, E. Nater, and W. Bleam, *Binding of mercury (II) to reduced sulphur groups in soil organic matter along upland-peat soil transects*, *J. Environ. Qual.*, Vol. 29, Issue 3, p. 855-865, Beamline(s) X11A, May 2000. [PR]
- D. Sparks, *New Frontiers in Elucidating the Kinetics and Mechanisms of Metal and Oxyanion Sorption at the Soil Mineral/Water Interface*, *J. Colloid Interface Sci.*, Vol. 163, p. 563-570, Beamline(s) X11A, 2000. [PR]
- D. Strawn and D. Sparks, *SorptionKinetics of Trace Elements in Soils and Soil Materials, Fate and Transport of Heavy Metals in the Vadose Zone*, H.M. Selim and I. Iskandar (Ed.) Lewis Publishers, Chelsea, MI, USA, p. 1-28, Beamline(s) X11A, 1999.
- D. Strawn and D. Sparks, *Effects of Soil Organic Matter on the Kinetics and Mechanisms of Pb(II) Sorption and Desorption in the Soil*, *Soil Sci. Soc. Am. J.*, Vol. 64, p. 144-156, Beamline(s) X11A, 2000. [PR]
- J. Xu, A. Wilkinson, and S. Pattanaik, *Manipulating and Quantifying the Compositional Heterogeneity in Sol-Gel Processed K(Ta1?xNb<sub>x</sub>)O<sub>3</sub>*, *Chem. Mater.*, Vol. 13, p. 1185-1193, Beamline(s) X11A, 2001. [PR]

## Beamline X11B

- M. Deras, M. Brenowitz, C. Ralston, M. Chance, and S. Woodson, *Folding mechanism of the tetrahymena ribozyme P4-P6 Domain*, *Biochemistry*, Vol. 39, p. 10975-10985, Beamline(s) X11B, 2000. [PR]

## Beamline X12B

- N. Ban, P. Nissen, J. Hansen, M. Capel, P. Moore, and T. Steitz, *Placement of protein and RNA structures into a 5 Angstrom-resolution map of the 50S ribosomal subunit*, *Nature*, Vol. 400, p. 841-847, Beamline(s) X12B and X12C, August 26, 1999. [PR/P]
- B. Canyuc, P. Focia, and A. Eakin, *The Role for an Invariant Aspartic Acid in Hypoxanthine Phosphoribosyltransferases is Examined Using Saturation Mutagenesis, Functional Analysis, and X-ray Crystallography*, *Biochemistry*, Vol. 40, Issue 9, p. 2754-2765, Beamline(s) X12B, February 07, 2001. [PR]
- P. Dai, P. Cebe, M. Capel, R. Alamo, and L. Mandelkern, *Small and wide-angle x-ray scattering study of metallocene isotactic poly(propylene)*, *J. Appl. Cryst.*, Vol. 33, p. 714-717, Beamline(s) X12B, 2000. [PR]
- D. Frenkel-Krispin, S. Levin-Zaidman, E. Shimon, S. Wolf, E. Wachtel, T. Arad, S. Finkel, R. Kolter, and A. Minsky, *Regulated phase transitions of bacterial chromatin: a non-enzymatic pathway for generic DNA protection*, *EMBO J.*, Vol. 20, Issue 5, p. 1184-1191, Beamline(s) X12B, February 2001. [PR/P]
- G. Georgiev, P. Dai, E. Oyebode, P. Cebe, and M. Capel, *Small angle X-ray Scattering Study and Thermal Analysis of Two Stage Melt Crystallization of PEEK*, *Bulletin of the American Physical Society*, Vol. 43, Issue 1, p. 269, APS, Beamline(s) X12B, 1998.
- G. Georgiev, P. Dai, E. Oyebode, P. Cebe, and M. Capel, *Two-Beam Interference of Long Wavelength Synchrotron Radiation*, *Proceedings of the Materials Research Society, Symposium on Applications of Synchrotron Radiation Techniques to Materials Science V*, Vol. 590, p. 137-143, MRS, Beamline(s) X12B, 1998.

- G. Georgiev, P. Dai, E. Oyebode, P. Cebe, and M. Capel, *Effects of Melt Processing on Evolution of Structure in PEEL*, *Proceedings of the National Aeronautic and Space Administration, Microgravity Materials Science Conference, Huntsville, Alabama*, Vol. Feb 1999, p. 107-108, sponsored by NASA, Beamline(s) X12B, 1998.
- C. Honeker and E. Thomas, *Perpendicular deformation of a near-single crystal triblock copolymer with a cylindrical morphology Part II: TEM*, *Macromolecules*, Vol. 33, Issue 25, p. 9407, Beamline(s) X12B, December 26, 2000. [PR]
- C. Honeker, E. Thomas, R. Albalak, D. Hajduk, S. Gruner, and M. Capel, *Perpendicular deformation of a near-single-crystal triblock copolymer with a cylindrical morphology Part I: Synchrotron SAXS*, *Macromolecules*, Vol. 33, Issue 25, p. 9395, Beamline(s) X12B, December 26, 2000. [PR]
- J. Kaplan, B. Korty, P. Axelsen, and P. Loll, *The role of sugar residues in molecular recognition by vancomycin*, *J. Med. Chem.*, Vol. 44, p. 1837-1840, Beamline(s) X12B and X8C, 2001. [PR]
- D. Logan, J. Andersson, B. Sjoberg, and P. Nordlund, *A glycyl radical site in the crystal structure of a class iii ribonucleotide reductase*, *Science*, Vol. 283, Issue 5407, p. 1499-1504, Beamline(s) X12B, 1999. [PR/P]
- J. Pascal, V. Chennathukuzhi, N. Hecht, and J. Robertus, *Mouse testis-brain RNA-binding protein (TB-RBP): expression, purification and crystal X-ray diffraction*, *Acta Cryst. D*, Vol. 57, Issue Pt 11, p. 1692-1694, Beamline(s) X12B, November 2001. [PR]
- C. Raman, H. Li, P. Martasek, V. Kral, B. Masters, and T. Poulos, *Crystal structure of constitutive endothelial nitric oxide synthase: a paradigm for pterin function involving a novel metal center*, *Cell*, Vol. 95, p. 939-950, Beamline(s) X12B, December 1998. [PR/P]
- C. Scheufler, A. Brinker, G. Bourenkov, S. Pegoraro, L. Moroder, H. Bartunik, U. Hartl, and I. Moarefi, *Structure of TRP Domain-Peptide Complexes: Critical Elements in the Assembly of the Hsp70-Hsp90 Multichaperone Machine*, *Cell*, Vol. 101, p. 199-210, Beamline(s) X12B, April 2000, 2000. [PR/P]
- U. Schulze-Gahmen, J. Jung, and S. Kim, *Crystal structure of a viral cyclin, a positive regulator of cyclin-dependent kinase 6*, *Structure Fold. Des.*, Vol. 7, Issue 3, p. 245-54, Beamline(s) X12B, March 15, 1999. [PR]
- ### Beamline X12C
- R. Almog, C. Waddling, F. Maley, G. Maley, and P. Van Roey, *Crystal structure of a deletion mutant of human thymidylate synthase delta(7-29) and its ternary complex with Tomudex and dUMP*, *Protein Sci.*, Vol. 10, p. 988-996, Beamline(s) X12C, May 2001. [PR]
- G. Cheetham, D. Jeruzalmi, and T. Steitz, *Structural basis for initiation of transcription from an RNA polymerase-promoter complex*, *Nature*, Vol. 3999, p. 80-83, Beamline(s) X12C, May 6, 1999. [PR/P]
- C. Chen and O. Herzberg, *Structures of the acyl-enzyme complexes of the staphylococcus aureus beta-lactamase mutant Glu166Asp:Asn170Gln with benzylpenicillin and cephaloridine*, *Biochemistry*, Vol. 40, p. 2351-2358, Beamline(s) X12C, 2001. [PR]
- N. Clout, M. Kretschmar, and C. Slingsby, *Crystal structure of the calcium-loaded spherulin 3a dimer sheds light on the evolution of the eye lens betagamma-crystallin domain fold*, *Structure*, Vol. 9, Issue 2, p. 114-123, Beamline(s) X12C, February 2001. [PR/P]
- J. Ekstrom, I. Mathews, B. Stanley, A. Pegg, and S. Ealick, *The crystal structure of human S-adenosylmethionine decarboxylase at 2.25 Å resolution reveals a novel fold*, *Structure Fold. Des.*, Vol. 7, Issue 5, p. 585-95, Beamline(s) X12C, May 1999. [PR]
- N. Grishin, A. Osterman, H. Brooks, M. Phillips, and E. Goldsmith, *X-ray structure of ornithine decarboxylase from trypanosoma brucei: the native structure and the structure in complex with r-difluoromethylornithine*, *Biochemistry*, Vol. 38, p. 15174-15184, Beamline(s) X12C, 1999. [PR]
- S. Ha, D. Walker, Y. Shi, and S. Walker, *The 1.9 Å crystal structure of Escherichia coli MurG, a membrane-associated glycosyltransferase involved in peptidoglycan biosynthesis*, *Protein Sci.*, Vol. 9, p. 1045-1052, Beamline(s) X12C, 2000. [PR]
- J. Harp, *Structural studies of the nucleosome core particle*, Ph.D. Thesis, The University of Tennessee, Tennessee, USA, Beamline(s) X12C, 2000.
- J. Harp, B. Hanson, D. TIMM, and G. BUNICK, *Asymmetries in the nucleosome core particle at 2.5 Å resolution*, *Acta Cryst. D*, Vol. 56, p. 1513-1534, Beamline(s) X12C, 2000. [PR]
- Q. Huai, J. Colandene, Y. Chen, F. Luo, Y. Zhao, M. Topal, and H. Ke, *Crystal Structure of Nael - an Evolutionary Bridge Between DNA Endonuclease and Topoisomerase*, *EMBO J.*, Vol. 19, Issue 12, p. 3110-3118, Beamline(s) X12C, 2000. [PR/P]
- Q. Huai, J. Colandene, M. Topal, and H. Ke, *Structure of Nael-DNA complex reveals dual-mode DNA recognition and complete dimer rearrangement*, *Nat. Struct. Biol.*, Vol. 8, Issue 8, p. 665-669, Beamline(s) X12C, August 2001. [PR/P]
- Q. Huai, Y. Xia, Y. Chen, B. Callahan, N. Li, and H. Ke, *Crystal structure of 1-aminocyclopropane-1-carboxylate (ACC) synthase in complex with aminoethoxyvinylglycine and pyridoxal-5'-phosphate provide new insight into catalytic mechanism*, *J. Biol. Chem.*, Vol. 276, Issue 41, p. 38210-38216, Beamline(s) X12C, October 2000. [PR]
- D. Kumaran, S. Eswaramoorthy, B. Luft, S. Koide, J. Dunn, C. Lawson, and S. Swaminathan, *Crystal structure of outer surface protein C (OspC) from the Lyme disease spirochete, Borrelia burgdorferi*, *EMBO J.*, Vol. 20, Issue 5, p. 971-978, Beamline(s) X12C and X25, February 1, 2001. [PR/P]
- W. Lee, M. McDonough, L. Kotra, Z. Li, N. Silvaggi, Y. Takeda, J. Kelly, and S. Mobashery, *A 1.2 Å Snapshot of a DD-Peptidase Catalyzing the Final Step of Bacterial Cell Wall Biosynthesis*, *Proc. Natl. Acad. Sci., USA*, Vol. 98, p. 1427-1431, Beamline(s) X12C, 2001.
- Y. Luo, R. Pfuetzner, S. Mosimann, M. Paetz, E. Frey, M. Cherney, B. Kim, J. Little, and N. Strynadka, *Crystal Structure of LexA: A Conformational Switch for Regulation of Self-Cleavage*, *Cell*, Vol. 106, p. 585-594, Beamline(s) X12C, September 7, 2001. [PR/P]
- M. McDonough, *Crystallographic Studies of Enzymes that Bind Penicillins: Penicillin G Acylase and DD-Peptidase*, Ph.D. Thesis, University of Connecticut, CT, USA, Beamline(s) X12C, 2000.
- T. Moraes, R. Edwards, S. McKenna, L. Pastushok, W. Xiao, M. Glover, and M. Ellison, *Crystal Structure of the Human Ubiquitin Conjugating Enzyme Complex, hMms2/hUbc13*, *Nat. Struct. Biol.*, Vol. 8, Issue 8, p. 669, Beamline(s) X12C, August 1, 2001. [PR/P]
- A. Morollo and M. Eck, *Structure of the cooperative allosteric anthranilate synthase from Salmonella typhimurium*, *Nat. Struct. Biol.*, Vol. 8, Issue 3, p. 243-7, Beamline(s) X12C, March 2001. [PR/P]
- J. Muller-Dieckmann, A. Grantz, and S. Kim, *The structure of the signal receiver domain of the Arabidopsis thaliana ethylene receptor ETR1*, *Structure Fold. Des.*, Vol. 7, Issue 12, p. 1547-56, Beamline(s) X12C, December 15, 1999. [PR]
- J. Murray, D. Terwey, L. Maloney, A. Karpeisky, N. Usman, L. Beigelman, and W. Scott, *The structural basis of hammerhead ribozyme self-cleavage*, *Cell*, Vol. 92, p. 665-673, Beamline(s) X12C, March 1998. [PR/P]

- M. Paetzel, F. Danel, L. de Castro, S. Mosimann, M. Page, and N. Strynadka, *Crystal structure of the class D beta-lactamase OXA-10*, *Nat. Struct. Biol.*, Vol. 7, Issue 10, p. 918-25, Beamline(s) X12C, October 2000. [PR/P]
- K. Parris, L. Lin, A. Tam, R. Mathew, J. Hixon, M. Stahl, C. Fritz, J. Seehr, and W. Somers, *Crystal structures of substrate binding to *Bacillus subtilis* holo-(acyl carrier protein) synthase reveal a novel trimeric arrangement of molecules resulting in three active sites*, *Structure Fold. Des.*, Vol. 8, Issue 8, p. 883-95, Beamline(s) X12C, August 15, 2000. [PR]
- E. Reinherz, K. Tan, L. Tang, P. Kern, J. Liu, Y. Xiong, R. Hussey, A. Smolyar, B. Hare, and et al, *The crystal structure of a t cell receptor in complex with peptide and MHC class II*, *Science*, Vol. 286, Issue 5446, p. 1913-1921, Beamline(s) X12C, December 3, 1999. [PR/P]
- J. Rojas, R. Trivedi, A. Clements, J. Zhou, D. Sterner, L. Wang, S. Berger, c. Allis, and R. Marmorstein, *Crystal structure of the tetracyclic GCN5/coenzyme-A/histone H3 peptide ternary complex reveals the mechanisms of substrate binding and catalysis by a histone acetyltransferase*, *Mechanisms of Eukaryotic Transcription*, p. 115, sponsored by Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, USA, Beamline(s) X12C, 1999.
- I. Schlichting and K. Chu, *Trapping intermediates in the crystal: ligand binding to myoglobin*, *Curr. Opin. Struct. Biol.*, Vol. 10, p. 744-752, Beamline(s) X12C, 2000. [PR]
- I. Schlichting and J. Reinstein, *pH influences fluoride coordination number of the AlFx phosphoryl transfer transition state analog*, *Nat. Struct. Biol.*, Vol. 6, Issue 8, p. 721-3, Beamline(s) X12C, August 1999. [PR/P]
- B. Selinsky, K. Gupta, C. Sharkey, and P. Loll, *Structural analysis of NSAID binding by prostaglandin H2 synthase: Time-dependent and time-independent inhibitors elicit identical enzyme conformations*, *Biochemistry*, Vol. 40, p. 5172-5180, Beamline(s) X12C and X8C, 2001. [PR]
- H. Shi, *The structural studies of protein translation: Yeast phenylalanine transfer RNA and elongation factor G domain III*, Ph.D. Thesis, Yale University, Connecticut, USA, Beamline(s) X12C, 2000.
- H. Shi and P. Moore, *The crystal structure of yeast phenylalanine tRNA at 1.93 Å resolution: a classic structure revisited*, *RNA*, Vol. 6, p. 1091-1105, Beamline(s) X12C, August 2000. [PR]
- S. Swaminathan and S. Eswaramoorthy, *Crystallization and preliminary X-ray analysis of Clostridium botulinum neurotoxin type B*, *Acta Cryst. D*, Vol. 56, p. 1024-1026, Beamline(s) X12C, 2000. [PR]
- L. Tari, T. Clarke, S. Ku, D. Dougan, and H. Vogel, *High resolution structures of the Escherichia coli periplasmic ferric siderophore binding protein FhuD complexed with siderophores*, *American Crystallographic Association Golden Anniversary Meeting*, St. Paul, Minnesota, July 22-27, 2000, Beamline(s) X12C, 2000.
- F. Valee, A. Lal, K. Moremen, and P. Howell, *Purification, crystallization and preliminary x-ray crystallographic analysis of recombinant murine Golgi mannosidase IA, a class I-mannosidase involved in Asn-linked oligosaccharide maturation*, *Acta Cryst. D*, Vol. D55, p. 571-573, Beamline(s) X12C, 1999. [PR]
- P. Van Roey, C. Wadding, K. Fox, M. Belfort, and V. Derbyshire, *Intertwined structure of the DNA-binding domain of intron endonuclease I-TevI with its substrate*, *EMBO J.*, Vol. 20, Issue 14, p. 3631-3637, Beamline(s) X12C, July 16, 2001. [PR/P]
- J. Vijayalakshmi, M. Mukherjee, J. Graumann, U. Jakob, and M. Saper, *The 2.2 Å Crystal Structure of Hsp33: A Heat Shock Protein with Redox-Regulated Chaperone Activity*, *Structure*, Vol. 9, p. 367-375, Beamline(s) X12C, May 2001. [PR/P]
- M. Weyand and I. Schlichting, *Crystal structure of wildtype tryptophan synthase complexed with the natural substrate indole-3-glycerol phosphate*, *Biochemistry*, Vol. 38, p. 35289-35292, Beamline(s) X12C, 2000. [PR]
- M. Weyand and I. Schlichting, *Structural basis for the impaired channeling and allosteric inter-subunit communication in the beta A169L/beta C170W mutant of tryptophan synthase*, *J. Biol. Chem.*, Vol. 275, p. 41058-41063, Beamline(s) X12C, 2000. [PR]
- B. Wimberly, R. Guymon, J. McCutcheon, S. White, and V. Ramakrishnan, *A detailed view of a ribosomal active site: the structure of the L11-RNA complex*, *Cell*, Vol. 97, p. 491-502, Beamline(s) X12C, May 1999. [PR/P]
- Y. Yan, N. Barlev, R. Haley, S. Berger, and R. Marmorstein, *Crystal Structure of Yeast Esa1 Suggests a Unified Mechanism for Catalysis and Substrate Binding by Histone Acetyltransferases*, *Mol. Cell.*, Vol. 6, p. 1195-1205, Beamline(s) X12C, 2000. [PR]
- T. Zhou, S. Radaev, B. Rosen, and D. Gatti, *Structure of the ArsA ATPase: the catalytic subunit of a heavy metal resistance pump*, *EMBO J.*, Vol. 19, Issue 17, p. 4838-45, Beamline(s) X12C, September 1, 2000. [PR/P]
- A. Zlotnick, I. Palmer, S. Stahl, A. Steven, and P. Wingfield, *Separation and crystallization of T=3 and T=4 icosahedral complexes of the hepatitis B virus core protein*, *Acta Cryst. D*, Vol. D55, p. 717-720, Beamline(s) X12C, 1999. [PR]

#### Beamline X14A

- H. Abe, D. Tamura, S. Moss, Y. Matsuo, Y. Ishii, and J. Bai, *Anomalous X-ray Scattering Associated with Short-Range Order in an A170Nil5Col5 Decagonal Quasicrystal*, *Mater. Sci. Eng. A*, Vol. 294, p. 299-302, Beamline(s) X14A, December 5, 2000. [PR]
- K. Chung, H. Hong, R. Aburano, J. Roesler, T. Chiang, and H. Chen, *Interface Structure of Cu Thin Films on C-Plane Sapphire Using X-ray Truncator Rod Analysis*, *Symposium on Applications of Synchrotron Radiation Techniques to materials Science III*, Vol. 437, sponsored by MRS, San Francisco, California, Beamline(s) X14A, 1997.
- V. Gosula, H. Chen, S. Teslic, and T. Egami, *Ordered Structure in Lead Magnoniobate (PMN) by Resonant X-Ray Scattering*, *Symposium on Applications of Synchrotron Radiation Techniques to Materials Science III*, Vol. 437, sponsored by MRS, San Francisco, California, Beamline(s) X14A, 1997.
- V. Gosula, A. Tkachuk, K. Chung, and H. Chen, *X-ray Scattering Study of the Transition Dynamics in Relaxor Ferroelectric Pb(Mg1/3Nb2/3)O3 (PMN)*, *J. Phys. Chem. Solids*, Vol. 61, Issue 2, p. 221-227, Beamline(s) X14A, 1999. [PR]
- A. Kazimirov, D. Goodner, M. Bedzyk, J. Bai, and C. Hubbard, *X-ray surface diffraction analysis of structural transformations on the (001) surface of oxidized SrTiO3*, *Surf. Sci.*, Vol. 492, Issue 1-2, p. L711, Beamline(s) X14A, Sept 2001, 2001. [PR]
- J. Kmetko, A. Datta, G. Evmenenko, and P. Dutta, *The effects of divalent ions on Langmuir monolayer and subphase structure: a grazing-incidence diffraction and Bragg rod study*, *J. Phys. Chem. B*, Vol. 105, Issue 44, p. 10818-10825, Beamline(s) X14A, November 8, 2001. [PR]
- J. Li, V. Holy, Z. Zhong, J. Kulik, S. Moss, A. Norman, A. Mascarenhas, J. Reno, and D. Follstaedt, *X-ray analysis of spontaneous lateral modulation in (InAs)n/(AlAs)m short-period superlattices*, *Appl. Phys. Lett.*, Vol. 78, p. 219, Beamline(s) X14A, 2001. [PR/P]
- J. Li, J. Kulik, V. Holy, Z. Zhong, S. Moss, Y. Zhang, and A. Mascarenhas, *X-ray diffraction from CuPt-ordered III-V ternary semiconductor alloy films*, *Phys. Rev. B*, Vol. 63, p. 155310, Beamline(s) X14A, 2001. [PR]

- J. Robertson, C. Sparks, G. Ice, X. Jiang, S. Moss, and L. Reinhard, *Local Atomic Arrangements in Binary Solid Solutions Studied by X-ray and Neutron Diffuse Scattering from Single Crystals*, Local Structure from Diffraction - Fundamental Materials Science Research Series, M.F. Thorpe and S. Billinge (Ed.) Plenum Press, New York, NY, USA, p. 175, Beamline(s) X14A, 1998.
- Y. Roh, R. Lauf, A. McMillian, C. Zhang, C. Rawn, J. Bai, and T. Phelps, *Microbial Synthesis and the Characterization of Metal-Substituted Magnetites*, Earth Planet Sci. Lett., Vol. 118, p. 529-534, Beamline(s) X14A, 2001. [PR]
- P. Williams, *Kinetics and Microanalysis of the Reaction Between Fly Ash and Calcium Hydroxide*, MS Thesis, Tennessee Technological University, Tennessee, Beamline(s) X14A, 2001.
- Z. Zhong, V. Holy, J. Li, J. Kulik, J. Bai, T. Golding, and S. Moss, *X-ray study of antiphase boundaries in the quadruple-period ordered GaAs<sub>0.975</sub>Sb<sub>0.025</sub> alloy*, J. Appl. Phys., Vol. 90, Issue 2, p. 644-649, Beamline(s) X14A, July 15, 2001. [PR]
- Z. Zhong, J. Li, J. Kulik, J. Bai, P. Chow, A. Norman, A. Mascarenhas, T. Golding, and S. Moss, *Quadruple-period Ordering Along [110] in a GaAs<sub>0.975</sub>Sb<sub>0.025</sub> Alloy on (001) GaAs*, Phys. Rev. B, Vol. 63, p. 33314, Beamline(s) X14A, 2001. [PR]

#### Beamline X15A

- L. Cheng, N. Sturchio, and M. Bedzyk, *Impurity Structure in a Molecular Ionic Crystal: Atomic-scale X-ray Study of CaCO<sub>3</sub>:Mn*, Phys. Rev. B, Vol. 63, p. 144104, Beamline(s) X15A, March 16, 2001. [PR]
- A. Kazimirov, N. Faleev, H. Temkin, M. Bedzyk, V. Dmitriev, and Y. MElnik, *High-resolution x-ray study of thin GaN film on SiC*, J. Appl. Phys., Vol. 89, Issue 11, p. 6092-6097, Beamline(s) X15A, June 2001. [PR]

#### Beamline X15B

- K. Rabe and P. Citrin, *Vacancy-induced Structural Relaxations in Yb<sub>2</sub>Si<sub>5</sub>C<sub>60</sub>*, Phys. Rev. B, Vol. B58, p. R551, Beamline(s) X15B, 1998. [PR]

#### Beamline X16A

- P. Bennett, D. Smith, and I. Robinson, *Strain in coherent cobalt silicide islands formed by reactive epitaxy*, Appl. Surf. Sci., Vol. 180, p. 65-72, Beamline(s) X16A, April 14, 2001. [PR]
- K. Nordlund, P. Partyka, R. Averback, I. Robinson, and P. Ehrhart, *Atomistic Simulation of Diffuse X-ray Scattering from Defects in Solids*, J. Appl. Phys., Vol. 22, p. 2278, Beamline(s) X16A, 2000. [PR]
- H. Reichert, H. Dosch, P. Eng, and I. Robinson, *Metastable vs. Unstable Growth in the Subsurface Ordering Dynamics of Cu<sub>3</sub>Au(001)*, Europhys. Lett., Vol. 53, p. 570, Beamline(s) X16A, 2001. [PR]
- D. Walko, *Structure and Facetting of Low-Symmetry Metal Surfaces*, PhD Thesis, University of Illinois, IL, USA, Beamline(s) X16A, 2000.
- D. Walko and I. Robinson, *Energetics of O-induced Faceting on Cu(111)*, Phys. Rev. B, Vol. 64, p. 045412, Beamline(s) X16A, 2001. [PR]

#### Beamline X16B

- D. Muller, T. Sorsch, S. Moccio, F. Baumann, K. Evans-Lutterodt, and G. Timp, *The electronic structure at the atomic scale of ultrathin gate oxides*, Nature, Vol. 399, p. 758-761, Beamline(s) X16B, June 24, 1999. [PR/P]

#### Beamline X16C

- D. Fanning, *Structure-Property Relations in Ferroelectric Materials*, PhD Thesis, University of Illinois, IL, USA, Beamline(s) X16C, 2000.
- A. Frenkel, *Solving the structure of nanoparticles by multiple-scattering EXAFS analysis*, J. Synch. Rad., Vol. 6, p. 293-295, Beamline(s) X16C, 1999. [PR]
- A. Frenkel, M. Frey, and D. Payne, *EXAFS analysis of particle size effect on local structure in BaTiO<sub>3</sub>*, J. Synch. Rad., Vol. 6, p. 515-517, Beamline(s) X16C, 1999. [PR]
- A. Frenkel and G. Korshin, *Studies of Cu(II) in soil by X-Ray Absorption Spectroscopy*, Can. J. Soil Sci., Vol. 81, p. 271-276, Beamline(s) X16C, 10 2001. [PR]
- A. Frenkel and G. Korshin, *EXAFS studies of the chemical state of lead and copper in corrosion products formed on the brass surface in potable water*, J. Synch. Rad., Vol. 6, p. 653-655, Beamline(s) X16C, 1999. [PR]
- A. Frenkel and G. Korshin, *A study of non-uniformity of metal-binding sites in humic substances by x-ray absorption spectroscopy*, International Seminar on Humic Substances, p. 191, Royal Society of Chemistry, Beamline(s) X16C, 1999.
- c. Hills, M. Nashner, A. Frenkel, J. Shapley, and R. Nuzzo, *Carbon support effect on bimetallic Pt-Ru nanoparticles formed from molecular precursors*, Langmuir, Vol. 15, p. 690-700, Beamline(s) X16C, 10 1999. [PR]
- A. Jokic, A. Frenkel, and P. Huang, *Effect of light on Birnessite catalysis of the Maillard reaction and its implication in the formation of humic substances*, Can. J. Soil Sci., Vol. 81, p. 200, Beamline(s) X16C, 10 2001. [PR]
- J. Pitney, *Coherent X-ray Diffraction*, PhD Thesis, University of Illinois, IL, USA, Beamline(s) X16C, 2000.
- I. Robinson and D. Fanning, *Resonant X-ray Diffraction Search for Non-stoichiometric Chemically Ordered Domains in PMN*, Fundamental Physics of Ferroelectrics 2000, Series AIP Conference Series, Vol. 435, R. Cohen (Ed.) AIP, p. 47-55, Beamline(s) X16C, 2000.
- M. Sorensen, M. Stackpoole, A. Frenkel, R. Bordia, G. Korshin, and T. Christensen, *Aging of iron (hydr)oxides by heat treatment and effects on heavy metal*, Environ. Sci. Tech., Vol. 34, p. 3991-4000, Beamline(s) X16C, 10 2000. [PR]

#### Beamline X17B1

- J. Chen, D. Weidner, J. Parise, M. Vaughan, and P. Raterron, *Observation of cation reordering during the olivine-spinel transition in fayalite by in situ synchrotron x-ray diffraction at high pressure and temperature*, Phys. Rev. Lett., Vol. 86, Issue 18, p. 4072-4075, Beamline(s) X17B1, April 30, 2001. [PR/P]
- A. Dilmanian, H. Weinmann, Z. Zhong, T. Bacarian, L. Rigon, T. Buttone, B. Ren, X. Wu, N. Zhong, and et al, *Sagittal focussing of high-energy synchrotron x-rays with asymmetric Laue crystals, I: theoretical considerations*, (invited paper), SPIE Medical Imaging, Vol. 4320, Issue 1, p. 417-426, sponsored by SPIE, SPIE, San Francisco, CA, USA, Beamline(s) X17B1 and X15A, 2001.
- F. Dilmanian, G. Morris, G. Le Duc, X. Huang, B. Ren, T. Bacarian, J. Allen, J. Kalef-Ezra, I. Orion, and et al, *Response of avian embryonic brain to spatially segmented x-ray microbeams*, Cell. Mol. Biol., Vol. 47, p. 485-494, Beamline(s) X17B1, 2001. [PR]
- A. Kavner and T. Duffy, *Pressure-volume-temperature paths in the laser-heated diamond anvil cell*, J. Appl. Phys., Vol. 89, Issue 3, p. 1907-1914, Beamline(s) X17B1, 2001. [PR]

- C. Lind, *Negative Thermal Expansion Materials Related to Cubic Zirconium Tungstate*, Ph.D. Thesis, Georgia Institute of Technology, GA, USA, Beamline(s) X17B1, 2001.
- C. Lind, D. VanDerveer, A. Wilkinson, J. Chen, M. Vaughan, and D. Weidner, *New High-Pressure Form of the Negative Thermal Expansion Materials Zirconium and Hafnium Molybdate*, *Chem. Mater.*, Vol. 13, Issue 2, p. 487-490, Beamline(s) X17B1, 2001. [PR]
- Y. Ma, H. Mao, R. Hemley, S. Gramsch, G. Shen, and M. Somayazulu, *Two dimensional energy dispersive x-ray diffraction at high pressures and temperatures*, *Rev. Sci. Instrum.*, Vol. 72, p. 1302, Beamline(s) X17B1 and X17C, Nov. 12, 2001. [PR]
- L. Ming, Y. Kim, J. Chen, M. Vaughan, S. Shieh, A. Jayaraman, and S. Sharma, *Isothermal Compressibility and Phase Transformation Studies on CuGeO<sub>3</sub> under High Pressures and High Temperatures using Synchrotron Radiation*, *J. Phys. Chem. Solids*, Vol. 62, p. 1185-1197, Beamline(s) X17B1, 2001. [PR]
- B. Noheda, D. Cox, G. Shirane, S. Park, E. Cross, and Z. Zhong, *Polarization rotation via a monoclinic phase in the piezoelectric 92%PbZn<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub>-8%PbTiO<sub>3</sub>*, *Phys. Rev. Lett.*, Vol. 86, p. 3891-3894, Beamline(s) X17B1 and X7A, April 23, 2001. [PR/P]
- E. Soignard, M. Somayazulu, J. Dong, O. Sankey, and P. McMillan, *High pressure-high temperature synthesis and elasticity of cubic nitride spinel gamma-Si<sub>3</sub>N<sub>4</sub>*, *J. Phys.: Condens. Matter*, Issue 13, p. 557-563, Beamline(s) X17B1, 2001. [PR]
- Z. Zhong, C. Kao, D. Siddons, and J. Hastings, *Sagittal focussing of high-energy synchrotron x-rays with asymmetric Laue crystals, II: experimental studies*, *J. Appl. Cryst.*, Vol. 34, p. 646-653, Beamline(s) X17B1 and X15A, 2001. [PR]
- Z. Zhong, C. Kao, D. Siddons, and J. Hastings, *Sagittal focussing of high-energy synchrotron x-rays with asymmetric Laue crystals, I: theoretical considerations*, *J. Appl. Cryst.*, Vol. 34, p. 504-509, Beamline(s) X17B1 and X15A, 2001. [PR]

## Beamline X17B2

G. Zou, Y. Ma, H. Mao, R. Hemley, and A. Gramsch, *A diamond gasket for the laser-heated diamond anvil cell*, *Rev. Sci. Instrum.*, Vol. 72, Issue 2, p. 1298-1301, Beamline(s) X17B2 and X17C, February 2001. [PR]

## Beamline X17C

- M. Carpenter, R. Hemley, and H. Mao, *High-pressure Elasticity of Stishovite and the P42/mmm-Pnm Phase Transition*, *J. Geophys. Res.*, Vol. 105, p. 10807-10816, Beamline(s) X17C, 2000. [PR]
- B. Chen, D. Penwell, M. Kruger, A. Yue, and B. Fultz, *Nanocrystalline Iron at High Pressure*, *J. Appl. Phys.*, Vol. 89, p. 4794-4796, Beamline(s) X17C, 2001. [PR]
- G. Chesnut and Y. Vohra, *Phase Transitions in Samarium Metal to 205 GPa*, *Science and Technology of High Pressure: Proceedings of AIRAPT-17*, p. 483-486, Universities Press, Hyderabad, India, M.H. Manghnani, W.J. Nellis and M.F. Nicol (Ed.) Beamline(s) X17C, 2000.
- I. Chou, A. Sharma, R. Burruss, J. Shu, H. Mao, R. Hemley, A. Goncharov, L. Stern, and S. Kirby, *New Methane Hydrates*, *Proc. Natl. Acad. Sci.*, Vol. 97, p. 13484-13487, Beamline(s) X17C, 2000.
- T. Duffy, *Radial diffraction in the diamond anvil cell: Constraints on elasticity, strength, and equation of state*, (invited paper), *Advanced Materials 2001: Ultra-High Pressure Research*, p. 51-52, sponsored by NIRIM International Symposium on Advanced Materials, Tsukuba, Japan, Beamline(s) X17C, 2001.

- T. Duffy, S. Shim, and A. Kavner, *Static Compression of Platinum to 1 MBAR: Implications for the Pressure-volume-temperature Equation of State*, *EOS Trans. AGU*, p. S41, Beamline(s) X17C, 2000.
- K. Ghandehari, S. Weir, J. Akella, and C. Ruddle, *Phase Stability and EOS of Orthorhombic High Pressure Phase of NaI to 204 Gpa*, *J. Phys. Chem. Solids*, Vol. 61, p. 1883-1887, Beamline(s) X17C, 2000. [PR]
- A. Goncharov, V. Struzhkin, E. Gregoryanz, J. Hu, R. Hemley, and H. Mao, *Raman spectrum and lattice parameters of MgB<sub>2</sub> as a function of Pressure*, *Phys. Rev. B*, Vol. 64, p. 100509, Beamline(s) X17C, August 22, 2001. [PR]
- A. Kavner and T. Duffy, *The strength of a natural ringwoodite at transition zone pressures*, *EOS Trans. AGU*, Vol. 81, p. 1148, sponsored by American Geophysical Union, Washington, DC, USA, Beamline(s) X17C, 2000.
- A. Kavner, T. Duffy, D. Heinz, and G. Shen, *Thermoelastic Behavior of Platinum nad MgO in the Laser-heated Diamond Anvil Cell*, *EOS Trans. AGU. Spring Meeting Suppl.*, Issue S163, Beamline(s) X17C and , 1998.
- H. Liu, C. Jin, J. Shu, J. Hu, H. Mao, Y. Zhao, and L. Wang, *Nanocrystalline Selenium Under High Pressure*, *Science and Technology of High Pressure: Proceedings of AIRAPT-17*, p. 495-497, Universities Press, Hyderabad, India, M.H. Manghnani, W.J. Nellis, and M.F. Nicols (Ed.) Beamline(s) X17C, 2000.
- S. Merkel, R. Hemley, and H. Mao, *Finite Element Modeling of Diamond Deformation at Multimegabar Pressures*, *Appl. Phys. Lett.*, Vol. 74, p. 656-658, Beamline(s) X17C and , 1999. [PR/P]
- S. Merkel, R. Hemley, H. Mao, and D. Teter, *Finites Element Modeling and ab initio Calcuation of Megbar Stress in the Diamond Anvil Cell*, *Science and Technology of High Pressure: Proceedings of AIRAPT-17*, p. 68-73, Universities Press, Hyderabad, India, M.H. Manghnani, W.J. Nellis and M.F. Nicol (Ed.) Beamline(s) X17C and , 2000.
- S. Qadri, E. Skelton, A. Dinsmore, B. Ratna, J. Hu, and C. Nelson, *Pressure Induced Phase Transitions in Nanoparticles of Zinc Sulfide*, *Science and Technology of High Pressure: Proceedings of AIRAPT-17*, p. 542-545, Universities Press, Hyderabad, India, M.H. Manghnani, W.J. Nellis and M.F. Nicol (Ed.) Beamline(s) X17C and , 2000.
- J. Sasaki, P. Freire, A. Moreno, R. Melo, I. Guedes, J. Mendes-Filho, J. Shu, J. Hu, and H. Mao, *Single Crystal X-ray Diffraction in Monohydrate L-asparagine Under Hydrostatic Pressure*, *Science and Technology of High Pressure: Proceedings of AIRAPT-17*, p. 502-505, Universities Press, Hyderabad, India, M.H. Manghnani, W.J. Nellis and M.F. Nicol, Beamline(s) X17C, 2000.
- S. Shim, T. Duffy, G. Shen, and D. Heinz, *Phase Transition in Cobalt above 18 Gpa and 1800 K*, *EOS Trans. AGU. Spring Meeting Suppl.*, Issue S164, Beamline(s) X17C and , 1998.
- N. Sobolev, B. Furstenko, S. Goryainov, J. Shu, R. Hemley, and H. Mao, *Fossilized High Pressure from the Earth's Deep Interior: The Coesite-in-Diamond Barometer*, *Proc. Nat. Acad. Sci.*, Vol. 97, p. 11875-11879, Beamline(s) X17C and , 2000.
- M. Somayazulu, K. Leinenweber, H. Hubert, P. McMillan, and G. Wolf, *High pressure- high temperature synthesis of spinel Ge<sub>3</sub>N<sub>4</sub>*, *Science and Technology of High Pressure: Proceedings of AIRAPT-17*, p. 663-666, Universities Press, Hyderabad, India, M.H. Manghnani, W.J. Nellis, and M.F. Nicol (Ed.) Beamline(s) X17C and X17B1, 2000.
- S. Speziale, C. Zha, T. Duffy, R. Hemley, and H. Mao, *Quasi-hydrostatic compression of magnesium oxide to 52 GPa: Implications for the pressure-volume-temperature equation of state*, *J. Geophys. Res.*, Vol. 106, p. 515-528, Beamline(s) X17C, 2001. [PR]

- J. Tang, T. Kikekawa, J. Hu, J. Shu, H. Mao, T. Furubayashi, A. Matsushita, T. Matsumoto, S. Nagata, and N. Matsumoto, *Pressure-Induced Structural Phase Transition in CuI<sub>2</sub>Se<sub>4</sub>*, *Science and Technology of High Pressure: Proceedings of AIRAPT-17*, p. 506-509, Universities Press, Hyderabad, India, M.H. Manghnani, W.J. Nellis and M.F. Nicol (Ed.) Beamline(s) X17C, 2000.
- O. Tschauner, H. Mao, and R. Hemley, *New Transformations of CO<sub>2</sub> at high Pressures and Temperatures*, *Phys. Rev. Lett.*, Vol. 87, Issue 7, p. 075701, Beamline(s) X17C, August 13, 2001. [PR/P]
- S. Weir, J. Akella, C. Rudd, Y. Vohra, and S. Catledge, *Epitaxial Diamond Encapsulation of Metal Microprobes for Novel High Pressure Experiments*, *Appl. Phys. Lett.*, Vol. 77, p. 3400-3402, Beamline(s) X17C and X17B1, 2000. [PR/P]
- H. Wenk, S. Matthies, R. Hemley, H. Mao, and J. Shu, *The plastic deformation of iron at pressures of the Earth's inner core*, *Nature*, Vol. 405, p. 1044-1047, Beamline(s) X17C, June 29, 2000. [PR/P]
- J. Xu and H. Mao, *Moissanite: A window for high-pressure experiments*, *Science*, Vol. 290, Issue 5492, p. 783-785, Beamline(s) X17C, October 27, 2000. [PR/P]
- C. Zha, H. Mao, and R. Hemley, *Elasticity of MgO and a Primary Pressure Scale to 55 GPa*, *Proc. Natl. Acad. Sci.*, Vol. 97, p. 13494-13499, Beamline(s) X17C, 2000.
- C. Zha, H. Mao, R. Hemley, and T. Duffy, *Recent Progress in High-Pressure Brillouin Scattering: Olive and Ice*, *The Review of High Pressure Science and Technology-Proceedings of AIRAPT-16 and HPCJ-38 Conference*, Vol. 7, p. 739-741, Japan Soc. High Pressure Sci. Tech., Kyoto, JAPAN, M. Nakahara (Ed.) Beamline(s) X17C, 1998.
- G. Zou, Y. Ma, H. Mao, J. Hu, M. Somayazulu, and R. Hemley, *Application of Diamond Gasket on the XRD Study at High Pressure*, *Science and Technology of High Pressure: Proceedings of AIRAPT-17*, p. 1107-1108, Universities Press, Hyderabad, India, M.H. Manghnani, W.J. Nellis and M.F. Nicol (Ed.) Beamline(s) X17C and X17B1, 2000.
- ### Beamline X18A
- R. Colella, G. Cappello, A. Dechelette, F. Schmidthusen, S. Decossas, J. Chevrier, F. Comin, V. Formoso, D. De Boissieu, et al., *Bulk and Surface Evidences for the Long Range Spatial Modulation of X-Ray Absorption in the A<sub>1</sub>-Pd-Mn Quasicrystal at Bragg Incidence*, *Proc. 7th Int. conf. On Quasicrystals ICQ7*, Beamline(s) X18A, 2000.
- R. Colella, Y. Zhang, J. Sutter, S. Ehrlich, and S. Kycia, *Debye-Waller Factors in a Quasicrystal*, *Phys. Rev. B*, Vol. 63, Issue 014202, p. 1-5, Beamline(s) X18A, 2000. [PR]
- G. Evmenenko, S. Dugan, J. Kmetko, and P. Dutta, *Molecular Ordering in Thin Liquid Films of Polydimethylsiloxanes*, *Langmuir*, Vol. 17, Issue 13, p. 4021-4024, Beamline(s) X18A, June 26, 2001. [PR]
- Z. Ma, Yang, Sun, and McBreen, *Charge-discharge characteristics and phase transition of mixed LiNi<sub>0.8</sub>Co<sub>0.2</sub>O<sub>2</sub> and LiMn<sub>2</sub>O<sub>4</sub> cathode materials for lithium-ion batteries*, *J. New Mater. Electrochem. Syst.*, Vol. 4, Issue 2, p. 123-127, Beamline(s) X18A, April 2001. [PR]
- H. Mo, H. Taub, S. Ehrlich, U. Volkmann, M. Pino, and F. Hansen, *X-ray Specular Reflectivity Study of an n-Alkane Film, Dotriaccontane, Adsorbed on Si(100) Substrates*, *March 2001 Meeting of the American Physical Society*, Vol. Bull. Am. Phys. Soc. 46, Issue 1, p. 870, sponsored by American Physical Society, College Park, MD, USA, Beamline(s) X18A, 2001.
- X. Sun, X. Yang, J. McBreen, Y. Gao, M. Yakovleva, X. Xing, and M. Daroux, *New Phase and Phase Transitions Observed in Over-Charged States of LiCoO<sub>2</sub>-based Cathode Materials*, *J. Power Sources*, Vol. 97-98, p. 274, Beamline(s) X18A and X7A, 2001. [PR]
- J. Sutter, E. Alp, M. Hu, P. Lee, H. Sinn, W. Sturhahn, T. Toellner, G. Bortel, and R. Colella, *Multiple-beam X-ray Diffraction near Exact Backscattering in Silicon*, *Phys. Rev. B*, Vol. 63, Issue 0941111, p. 1-12, Beamline(s) X18A, 2001. [PR]
- A. Tkachuk and H. Chen, *Anomalous x-ray scattering of chemical and polar nanodomains in PbMg<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub> single crystal*, *Ferroelectrics Letters*, Vol. 253, p. 1-9, Beamline(s) X18A, 2001. [PR]
- A. Tkachuk, H. Chen, P. Zschack, and E. Colla, *Anomalous synchrotron x-ray scattering studies of nanodomains in PbMg<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub>*, *Fundamental Physics of Ferroelectrics 2000*, p. 136-142, Melville, NY, USA, Beamline(s) X18A, 2000.
- Y. Xia, T. Sakai, T. Fujieda, X. Yang, X. Sun, J. McBreen, and M. Yoshio, *Co-relating Capacity-Fading and Structural Changes in Li<sub>1-y</sub>Mn<sub>2-y</sub>O<sub>4</sub>d Spinels Cathode Materials: A Systematic Study on the Effects of Li/Mn Ratio and Oxygen Deficiency*, *J. Electrochem. Soc.*, Vol. 148, p. A723, Beamline(s) X18A and X7A, 2001. [PR]
- X. Yang, X. Sun, M. Balasubramanian, and J. McBreen, *Relationship Between Cycling Performance and Structural Phase Transitions of Li<sub>1-y</sub>Mn<sub>2-y</sub>O<sub>4</sub> Cathode materials Studied by Synchrotron X-ray Diffraction*, *10th International Meeting on Lithium Batteries*, Como, Italy, Beamline(s) X18A, 2000.
- X. Yang, X. Sun, M. Balasubramanian, J. McBreen, Y. Xia, T. Sakai, and M. Yoshio, *Effects of Oxygen Vacancy Population on Structural Changes in Li<sub>1-y</sub>Mn<sub>2-y</sub>O<sub>4</sub> Type Cathode Materials with Different Temperatures and Charge-Discharge States*, *41st Battery Symposium in Japan*, Nov. 20-22, 2000, Nagoya, Japan, p. 404, Beamline(s) X18A and X7A, 2000.
- X. Yang, X. Sun, and J. McBreen, *Structural Changes and Thermal Stability: In Situ X-ray Diffraction Studies of A New Cathode Material LiMg<sub>0.7</sub>Ca<sub>0.3</sub>Ti<sub>0.7</sub>Ni<sub>0.3</sub>O<sub>2</sub>*, *Electrochem. Commun.*, Vol. 2, p. 733, Beamline(s) X18A and X7A, 2000. [PR]
- C. Yu, A. Richter, J. Kmetko, A. Datta, and P. Dutta, *X-ray diffraction evidence of ordering in a normal liquid near the solid-liquid interface*, *Europhys. Lett.*, Vol. 50, p. 487, Beamline(s) X18A, 2000. [PR]
- ### Beamline X18B
- A. Ankudinov, J. Rehr, J. Low, and S. Bare, *Effect of hydrogen adsorption on the x-ray absorption spectra of small Pt clusters*, *Phys. Rev. Lett.*, Vol. 86, Issue 8, p. 1642-1645, Beamline(s) X18B, February 19, 2001. [PR/P]
- A. Ankudinov, J. Rehr, J. Low, and S. Bare, *Pt L-edge XANES as a probe of Pt clusters*, *J. Synch. Rad.*, Vol. 8, p. 578-580, Beamline(s) X18B, March 1, 2001. [PR]
- I. Fawcett, G. Veith, M. Greenblatt, M. Croft, and I. Nowik, *Properties of the Perovskites SrMn<sub>1-x</sub>FeO<sub>3</sub>* ( $x=1/2, 1/3, 2/3$ ), *Solid State Sciences*, Vol. 2, p. 821-831, Beamline(s) X18B and X19A, 2000.
- I. Fawcett, G. Veith, M. Greenblatt, M. Croft, and I. Nowik, *Properties of the n=3 Ruddlesden-Popper Phases Sr<sub>4</sub>Mn<sub>3-x</sub>Fe<sub>x</sub>O<sub>10-8</sub> (x=1, 1.5, 2)*, *J. Solid State Chem.*, Vol. 155, p. 96-104, Beamline(s) X18B and X19A, 2000. [PR]
- A. Frenkel, A. Vairavamurthy, and M. Newville, *A study of the coordination environment in aqueous cadmium-thiol complexes by EXAFS spectroscopy: experimental vs theoretical standards*, *J. Synch. Rad.*, Vol. 8, p. 669-671, Beamline(s) X18B, 2001. [PR]

- J. Herrera, L. Balzano, A. Borgna, W. Alvarez, and D. Resasco, *Relationship between the Structure/Composition of Co-Mo Catalysts and Their Ability to Produce Single-Walled Carbon Nanotubes by CO Disproportionation*, *J. Catal.*, Vol. 204, Issue 1, p. 129-145, Beamline(s) X18B, November 15, 2001. [PR]
- A. Ignatov, N. Ali, and S. Khalid, *Mn K-edge XANES study of the La<sub>1-x</sub>Ca<sub>x</sub>MnO<sub>3</sub> CMRs*, *NSLS Activity Report*, Issue 1999, p. 7-234, Beamline(s) X18B, 1999.
- A. Ignatov, S. Khalid, S. Roy, and N. Ali, *Theoretical study of Mn K-edge in La<sub>1-x</sub>Ca<sub>x</sub>MnO<sub>3</sub>*, *J. Synch. Rad.*, Vol. 8, p. 898-900, Beamline(s) X18B and X19A, March 2001. [PR]
- G. Jacobs, Y. Zhang, T. Das, J. Li, P. Patterson, and B. Davis, *Deactivation of Ru Promoted Co/Al<sub>2</sub>O<sub>3</sub> Catalysts for Fischer Tropsch Synthesis*, *9th International Symposium on Catalyst Deactivation*, Vol. 139, Issue 1, p. 415-422, sponsored by ISCD Committee, Elsevier, Amsterdam, Netherlands, Beamline(s) X18B, 2001.
- E. Kakuno, P. Pietraski, S. Khalid, and L. Miller, *A comparisson of 100 element S-detector with 13-element Ge detector*, *NSLS Activity Report*, Issue 1999, p. 7-226, Beamline(s) X18B, 1999.
- K. Kemner, X. Feng, J. Liu, G. Fryxell, L. Wang, A. Kim, M. Gong, and S. Mattigod, *Investigation of the local chemical interactions between Hg and self-assembled monolayers on mesoporous supports*, *J. Synch. Rad.*, Vol. 6, p. 633-635, Beamline(s) X18B, 1999. [PR]
- S. Khalid, E. Kakuno, and L. Miller, *Use of Passivated Implanted Planar Silicon (PIPS) detector for X-ray absorption spectroscopy*, *NSLS Activity Report*, Issue 1999, p. 7-227, Beamline(s) X18B, 1999.
- K. Padden, J. Krebs, C. MacBeth, R. Scarrow, and A. Borovik, *Immobilized Metal Complexes in Porous Organic Hosts: Development of a Material for the Selective and Reversible Binding of Nitric Oxide*, *J. Am. Chem. Soc.*, Vol. 123, p. 1072-1079, Beamline(s) X18B and X9B, 2001. [PR]
- Q. Qian, T. Tyson, C. Kao, M. Croft, S. Cheong, and M. Greenblatt, *Thermal effects in the X-Ray Spectra of La<sub>1-x</sub>CaxMnO<sub>3</sub>*, *Phys. Rev. B*, Vol. 62, p. 13472-13481, Beamline(s) X18B, 2000. [PR]
- K. Ramaujachary, J. Sunstrom, I. Fawcett, P. Shunk, M. Greenblatt, M. Croft, I. Novick, R. Herber, and S. Khalid, *The dual Valence character of Eu in Eu<sub>2</sub>VO<sub>4</sub>*, *NSLS Activity Report*, Issue 1999, p. 7-237, Beamline(s) X18B and X19A, 1999.
- M. Vairavamurthy, A. Frenkel, W. Goldenberg, and S. Khalid, *Coordination structure in Cd(II) Thiol complexes As revealed by X-ray absorption spectroscopy*, *NSLS Activity Report*, Issue 1999, p. 7-229, Beamline(s) X18B, 1999.
- M. Vairavamurthy, W. Goldenberg, S. Ouyang, and S. Khalid, *The Interaction of hydrophilic thiols with cadmium: investigation with a simple model, 3-mercaptopropionic acid*, *Mar. Chem.*, Vol. 70, Issue 2000, p. 181-189, Beamline(s) X18B, 2000. [PR]
- H. Woo, T. Tyson, M. Croft, S. Cheong, J. Woicik, and B. Brandt, *Correlations Between the Magnetic and Structural Properties of Ca Doped BiMnO<sub>3</sub>*, *Phys. Rev. B*, Vol. 63, p. 134412-24, Beamline(s) X18B and X19A, 2000. [PR]
- Z. Zeng, J. Sunstrom, M. Greenbelt, M. Croft, and S. Khalid, *Giant Magnetoresistance in CaCu<sub>3</sub>Mn<sub>4</sub>O<sub>12</sub>-based oxides with Perovskite-Related structure*, *J. Solid State Chem.*, Vol. 145, p. 803, Beamline(s) X18B, 1999. [PR]
- K. Zhang, G. Rosenbaum, and G. Bunker, *Design and testing of a prototype multilayer analyzer x-ray fluorescence detector*, *J. Synch. Rad.*, Vol. 6, p. 220-221, Beamline(s) X18B and X9B, 1999. [PR]
- A. Cady, J. Pitney, R. Pindak, S. Watson, H. Gleeson, P. Cluzeau, P. Barois, A. Levelut, W. Caliebe, et al., *Orientational ordering in the chiral smectic-C\*Fl2 liquid crystal phase determined by resonant polarized x-ray diffraction*, *Phys. Rev. E*, Vol. 64, Issue 050702(R), Beamline(s) X19A, November 2001. [PR]
- L. Chen, T. Rajh, W. Jager, J. Nedeljkovic, and M. Thurnauer, *X-ray absorption reveals surface structure of titanium dioxide nanoparticles*, *J. Synch. Rad.*, Vol. 6, p. 445-447, Beamline(s) X19A, 1999. [PR]
- I. Fawcett, G. Veith, M. Greenblatt, M. Croft, and I. Nowik, *Investigation of Sr<sub>3</sub>Fe<sub>2-x</sub>Mn<sub>x</sub>O<sub>7-d</sub> the n=2 Ruddlesden-Popper Phases with d<sub>3</sub>/d<sub>4</sub> interactions*, *J. Inorg. Mater.*, Vol. 2, p. 513-522, Beamline(s) X19A and X18B, 2000. [PR]
- W. Huang, P. Shuk, M. Greenblatt, M. Croft, and L. Liu, *Structural and Electrical Characterization of a Novel Mixed-Conductor-CeO<sub>2</sub>-Sm<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub> Solid Solution*, *AJS*, Vol. 147, p. 4196-4202, Beamline(s) X19A and X18B, 2000. [PR]
- F. Huggins, M. Najih, and G. Huffman, *Direct speciation of chromium in coal combustion by-products by X-ray absorption fine structure spectroscopy*, *Fuel*, Vol. 78, Issue 1, p. 233-242, Beamline(s) X19A, January 1999. [PR]
- L. Hundal, A. Carmo, W. Bleam, and M. Thompson, *Sulfur in Biosolids-Derived Fulvic Acid: Characterization by XANES Spectroscopy and Selective Dissolution Approaches*, *Environ. Sci. Technol.*, Vol. 34, Issue 24, p. 5184-5188, Beamline(s) X19A, 2000. [PR]
- K. Hutchison, D. Hesterberg, and J. Chou, *Stability of Reduced Organic Sulfur in Humic Acid as Affected by Aeration and pH*, *Soil Sci. Soc. Am. J.*, Vol. 65, p. 704-709, Beamline(s) X19A, 2001. [PR]
- H. Lee, X. Sun, X. Yang, J. McBreen, and L. Choi, *Synthesis of Cyclic Aza-ether Compounds and Studies of Their Use as Anion Receptors in Non-aqueous Lithium Halide Salts Solution*, *J. Electrochem. Soc.*, Vol. 147, Issue 1, p. 66, Beamline(s) X19A, January 2000. [PR]
- H. Lee, X. Yang, X. Sun, and J. McBreen, *Synthesis of a New Family of Fluorinated Boronate Compounds as Anion Receptors and Studies of Their Use as Additives in Lithium Battery Electrolytes*, *J. Power Sources*, Vol. 97-98, p. 566, Beamline(s) X19A, 2001. [PR]
- H. Lee, X. Yang, C. Xiang, J. McBreen, J. Callahan, and L. Choi, *Synthesis of Anion Receptor Grafted Siloxane Polymers and the Ionic Conductivity Studies of Polymer-Salt Complexes*, *J. Electrochem. Soc.*, Vol. 146, Issue 1999, p. 941, Beamline(s) X19A, 1999. [PR]
- P. Mach, *Polarized Resonant X-Ray Scattering Study of Chiral Smectic-C Phases in Freely-Suspended Liquid-Crystal Films*, Ph.D. Thesis, University of Minnesota, Minnesota, USA, Beamline(s) X19A, 1999.
- J. Qian, U. Skyyberg, Q. Tu, W. Bleam, and W. Frech, *Efficiency of solvent extraction methods for the determination of methyl mercury in forest soils*, *Fresenius J. Anal. Chem.*, Vol. 367, p. 467-473, Beamline(s) X19A, 2000. [PR]
- Q. Qian, T. Tyson, C. Kao, M. Croft, S. Cheong, G. Popov, and M. Greenblatt, *Local Structural Distortions in Manganites Probed by Comparative X-Ray Emission Absorption Near Edge Measurements*, *Phys. Rev. B*, Vol. 64, p. 24430-7, Beamline(s) X19A and X18B, 2001. [PR]
- J. Rodriguez, T. Jirsak, M. Perez, S. Chaturvedi, M. Kuhn, L. Gonzalez, and A. Maiti, *Studies on the behavior of mixed-metal oxides and desulfurization reaction of H<sub>2</sub>S and SO<sub>2</sub> with Cr<sub>2</sub>O<sub>3</sub>(0001), Mg(100), and CrxMg<sub>1-x</sub>O(100)*, *J. Am. Chem. Soc.*, Vol. 122, p. 12362-12370, Beamline(s) X19A and U7A, 2000. [PR]

## Beamline X19A

- M. Szulczevski, P. Helmke, and W. Bleam, *XANES Spectroscopy Studies of Cr(VI) Reduction by Thiols in Organosulfur Compounds and Humic Substances*, *Environ. Sci. Tech.*, Vol. 35, Issue 6, p. 1134-1141, Beamline(s) X19A and X18B, 2001. [PR]
- R. Taylor, S. Shen, S. I Tu, and W. Bleam, *Chromate Removal by Dithionite-reduced Clays: Direct XANES Evidence of Chromate Reduction at Clay Surfaces, Clays and Clay Minerals*, Vol. 48, Issue 6, p. 648-654, Beamline(s) X19A and X18B, 2000. [PR]
- G. Veith, M. Greenblatt, M. Croft, and J. Goodenough, *Synthesis and Characterization of Oxynitride Pyrochlore-Sm<sub>2</sub>Mo<sub>2</sub>O<sub>10</sub>.383N<sub>3.17</sub>*, *Mater. Res. Bull.*, Vol. 36, p. 1521-30, Beamline(s) X19A and X18B, 2001. [PR]
- Z. Zeng, M. Croft, and M. Greenblatt, *Large Magnetoresistance in Sr<sub>2</sub>Cr<sub>1-x</sub>Mo<sub>x</sub>O<sub>3</sub> (d=0, 0.2) a Double Perovskite System*, *Mater. Res. Bull.*, Vol. 36, Issue 705, p. 715, Beamline(s) X19A and X18B, 2001. [PR]
- Z. Zeng, M. Greenblatt, and M. Croft, *Charge ordering and Magnetoresistance of Ca<sub>1-x</sub>Ce<sub>x</sub>MnO<sub>3</sub>*, *Phys. Rev. B*, Vol. 63, p. 224410-20, Beamline(s) X19A and X18B, 2001. [PR]
- Beamline X19C**
- I. Baker, F. Liu, K. Jia, X. Hu, D. Cullen, and M. Dudley, *X-ray Topographic Observations of Dislocation/Grain Boundary Interactions in Ice*, *Ann. Glac.*, Vol. 31, p. 103-117, Beamline(s) X19C, 2000. [PR]
- E. Bitto, M. Li, A. Tikhonov, M. Schlossman, and W. Cho, *Mechanism of annexin-I mediated membrane aggregation*, *Biochemistry*, Vol. 39, p. 13469-13477, Beamline(s) X19C, 2000. [PR]
- D. Bliss, J. Zhao, G. Bryant, R. Lancto, M. Dudley, and V. Prasad, *Dislocation Generation near the Seed-Crystal Interface During MLEC Growth of Sulfur-Doped InP*, *11th International Conference on Indium Phoshide and Related Materials*, p. 163-166, sponsored by IEEE, IEEE, Piscataway, NJ, USA, Beamline(s) X19C, 1999.
- D. Chekmarev, D. Oxtoby, and S. Rice, *Test of the universal local pseudopotential for the description of an inhomogeneous metal*, *Phys. Rev. B*, Vol. 61, p. 10116-10124, Beamline(s) X19C, 2000. [PR]
- M. Dudley, X. Huang, W. Vetter, G. Dhanaraj, and . Schowalter, *Tailoring X-ray Beam Energy Spectrum to Enhance Image Quality of New Radiography Contrast Agents Based on Gd or Other Lanthanides*, (invited paper), *International Workshop on Preparation and Characterization of Technologically Important Single Crystals*, p. 44-51, sponsored by National Physical Laboratory, New Delhi, India, National Physical Laboratory, New Delhi, India, New Delhi, India, Beamline(s) X19C, 2001.
- M. Dudley, B. Raghathanachar, H. Chen, W. Johnson, S. Tiddrow, A. Khan, and C. Fazi, *Synchrotron White Beam X-ray Topography Characterization of Defects in Technologically Important SiC and InP Single Crystals*, (invited paper), *15th European Frequency and Time Forum*, p. 284-288, sponsored by Swiss Foundation for Research in Microtechnology, Neuchatel, Switzerland, Beamline(s) X19C, 2001.
- X. Huang, M. Dudley, and J. Zhao, *Forbidden X-ray Wavefields of Three-Beam Bragg Reflections from Thick Crystals*, *Acta Cryst. A*, Vol. 57, Issue 1, p. 68-75, Beamline(s) X19C, January 2001. [PR]
- T. Kuhr, E. Sanchez, M. Skowronski, W. Vetter, and M. Dudley, *Hexagonal Voids and the Formation of Micropipes During SiC Sublimation Growth*, *J. Appl. Phys.*, Vol. 89, Issue 8, p. 4625-4630, Beamline(s) X19C, April 2001. [PR]
- M. Li, A. Tikhonov, D. Chaiko, and M. Schlossman, *Coupled Capillary Wave Fluctuations in Thin Aqueous Films on an Aqueous Subphase*, *Phys. Rev. Lett.*, Vol. 86, p. 5934, Beamline(s) X19C, 2001. [PR]
- D. Mitrinovic, S. Williams, and M. Schlossman, *X-ray study of oil-microemulsion and oil-water interfaces in ternary amphiphilic systems*, *Phys. Rev. E*, Vol. 63, p. 021601, Beamline(s) X19C, 2001. [PR]
- J. Peng, G. Barnes, I. Gentle, G. Foran, T. Le, and M. Crossley, *X-ray Scattering Studies of Mixed Langmuir Monolayers and Langmuir-Blodgett Films of a Non-Centrosymmetric Porphyrin with Cadmium Arachidate*, *Langmuir*, Vol. 17, p. 1936-1940, Beamline(s) X19C, 2001. [PR]
- V. Prasad, Q. Chen, H. Zhang, and M. Dudley, *Role of Modeling in Process and System Development for Crystal Growth*, (invited paper), *International Workshop on Preparation and Characterization of Technologically Important Single Crystals*, p. 95-102, sponsored by National Physical Laboratory, New Delhi, India, National Physical Laboratory, New Delhi, India, New Delhi, India, Beamline(s) X19C, 2001.
- J. Rojo, G. Slack, K. Morgan, B. Raghathanachar, M. Dudley, and L. Schowalter, *Report on the Growth of Bulk Aluminum Nitride and Subsequent Substrate Preparation*, *J. Cryst. Growth*, Vol. 231, Issue 3, p. 317-321, Beamline(s) X19C, October 2001. [PR]
- S. Sadow, G. Melnychuk, M. Mynbaeva, I. Nikitina, W. Vetter, L. Jin, M. Dudley, M. Shamsuzzoha, V. Dmitriev, and et al, *Structural Characterization of SiC Epitaxial Layers Grown on Porous SiC Substrates*, *Materials Research Society Meeting*, Vol. 640, p. H2.7.1-H2.7.6, sponsored by MRS, MRS, Warrendale, PA, USA, Beamline(s) X19C, 2001.
- E. Sanchez, J. Liu, W. Vetter, M. Dudley, R. Bertke, W. Mitchel, and M. Skowronski, *Effect of Surface Finish on the Dislocation Density in Sublimation Grown SiC Layers*, *Materials Research Society Meeting*, Vol. 640, p. H1.3.1-H1.3.6, sponsored by MRS, MRS, Warrendale, PA, USA, Beamline(s) X19C, 2001.
- M. Schlossman, M. Li, D. Mitrinovic, and A. Tikhonov, *X-ray scattering from liquid-liquid interfaces*, *High Perform. Polym.*, Vol. 12, p. 551-563, Beamline(s) X19C, 2000. [PR]
- A. Tikhonov, M. Li, and M. Schlossman, *Phase Transition Behavior of Fluorinated Monolayers at the Water-Hexane Interface*, *J. Phys. Chem. B*, Vol. 105, p. 8065, Beamline(s) X19C, 2001. [PR]
- W. Vetter, *Characterization of Dislocation Structures in Silicon Carbide Single Crystals*, Ph.D. Thesis, Dept. of Materials Science & Eng., SUNY Stony Brook, NY, USA, Beamline(s) X19C, 1999.
- W. Vetter and M. Dudley, *X-ray topographic dislocation contrast visible in reflections orthogonal to the Burgers vectors of axial screw dislocations in hexagonal silicon carbide*, *J. Appl. Cryst.*, Vol. 34, p. 20-26, Beamline(s) X19C, 2001. [PR]
- W. Vetter and M. Dudley, *Transmission Electron Microscopic Studies of Dislocations in PVT-Grown Silicon Carbide*, *Philos. Mag. A*, Vol. 81, Issue 12, p. 2885-2902, Beamline(s) X19C, 2001. [PR]
- W. Vetter, W. Huang, P. Neudeck, J. Powell, and M. Dudley, *Synchrotron White Beam Topographic Studies of 2H SiC Single Crystals*, *J. Cryst. Growth*, Vol. 224, Issue 3-4, p. 269-273, Beamline(s) X19C, April 2001. [PR]
- B. Yang, D. Li, Z. Huang, and S. Rice, *The structure of the liquid-vapor interface of a dilute Pb in Ga alloy*, *Phys. Rev. B*, Vol. 62, p. 13111-13120, Beamline(s) X19C, 2000. [PR]

## Beamline X20A

- R. Christianson, *X-ray & Neutron Scattering Studies of Rb<sub>2</sub>MnF<sub>4</sub> and Cu<sub>1-x</sub>MgxGeO<sub>3</sub> in an External Magnetic Field*, Ph.D. Thesis, MIT, MA, USA, Beamline(s) X20A and X20C, 2001.
- P. Mooney, J. Jordan-Sweet, and S. Christiansen, *Scanning X-ray Microtopographs of Misfit Dislocations at SiGe/Si Interfaces*, *Appl. Phys. Lett.*, Vol. 79, Issue 15, p. 2363, Beamline(s) X20A, October 8, 2001. [PR/P]
- F. Nolting, A. Scholl, J. Stohr, J. Seo, J. Pompeyrine, H. Slegwart, J. Locquet, S. Anders, M. Toney, et al., *Direct Observation of the Alignment of Ferromagnetic Spins by Antiferromagnetic Spins*, *Nature*, Vol. 405, p. 767-769, Beamline(s) X20A and X20C, June 15, 2001. [PR/P]
- P. Wang, I. Noyan, S. Kaldor, J. Jordan-Sweet, E. Liniger, and C. Hu, *Real-time X-ray Microbeam Characterization of Electromigration Effects in Al(Cu) Wires*, *Appl. Phys. Lett.*, Vol. 78, Issue 18, p. 2712-2714, Beamline(s) X20A, April 30, 2001. [PR/P]
- Y. Wang, *Synchrotron X-ray Scattering Study of Non-magnetic Ions Doped CuGeO<sub>3</sub>*, Ph.D. Thesis, MIT, MA, USA, Beamline(s) X20A and X20C, 2001.
- ### Beamline X20C
- C. Cabral Jr., C. Lavoie, J. Harper, and J. Jordan-Sweet, *The Use of InSitu X-ray Diffraction, Optical Scattering and Resistance Analysis Techniques for Evaluation of Copper Diffusion Barriers in Blanket Films and Danascene Structures*, *Thin Solid Films*, Vol. 397, Issue 1-2, p. 194, Beamline(s) X20C, October 2001. [PR]
- J. Chun, J. Carlsson, P. Desjardins, D. Bergstrom, I. Petrov, J. Green, C. Lavoie, C. Cabral Jr., and L. Hultman, *Synchrotron X-ray Diffraction and Transmission Electron Microscopy Studies of Interfacial Reaction Paths and Kinetics During Annealing of Fully-002-textured Al/TiN Bilayers*, *J. Vac. Sci. Technol., A*, Vol. 19, Issue 1, p. 182-191, Beamline(s) X20C, January 2001. [PR]
- J. Chun, P. Desjardins, C. Lavoie, C. Shin, C. Cabral Jr., I. Petrov, and J. Greene, *Interfacial Reactions in Epitaxial Al/TiN(111) Model Diffusion Barriers: Formation of an Impervious Self-limited Wurtzite-structure AlN(0001) Blocking Layer*, *J. Appl. Phys.*, Vol. 89, Issue 12, p. 7841-7845, Beamline(s) X20C, June 15, 2001. [PR]
- J. Chun, P. Desjardins, I. Petrov, J. Greene, C. Lavoie, and C. Cabral Jr., *Interfacial Reaction Pathways and Kinetics During Annealing of Epitaxial Al/TiN(001) Model Diffusion Barrier Systems*, *Thin Solid Films*, Vol. 391, p. 69-80, Beamline(s) X20C, July 2, 2001. [PR]
- C. Lavoie, C. Cabral Jr., F. D'Heurle, and J. Harper, *Exploring Thin Film Reactions Using Simultaneous X-ray, Surface Roughness, and Resistance Measurements*, *Defect Diffus Forum*, Vol. 194-199, p. 1477, Beamline(s) X20C, July 2001. [PR]
- C. Lavoie, C. Cabral Jr., J. Harper, G. Tas, C. Morath, R. Stoner, and H. Maris, *Detection of Cobalt Silicide Phase Formations by Ultrafast Optical Measurements*, *Thin Solid Films*, Vol. 374, p. 42-48, Beamline(s) X20C, October 3, 2000. [PR]
- W. Lee, M. Carey, M. Toney, P. Rice, B. Gurney, H. Chang, E. Allen, and D. Mauri, *Oxygen-enhanced IrMn Spin Valves Deposited by Ion-beam and Magnetron Sputtering*, *J. Appl. Phys.*, Vol. 89, Issue 11, p. 6925-6927, Beamline(s) X20C and X20A, June 1, 2001. [PR]
- S. Park, *Physics of Liquid Crystals Embedded in Silica Gels*, Ph.D. Thesis, MIT, MA, USA, Beamline(s) X20C and X20A, 2001.
- A. Quintero, M. Libera, C. Cabral Jr., C. Lavoie, and J. Harper, *Two Step Codeposition Process for Enhanced C<sub>54</sub>-TiSi<sub>2</sub> Formation in the Ti-Si Binary System*, *J. Appl. Phys.*, Vol. 89, Issue 9, p. 4879-4885, Beamline(s) X20C, May 1, 2001. [PR]
- R. Roy, C. Cabral Jr., and C. Lavoie, *The Future of Silicides for CMOS Contacts*, *Materials Research Symposium Proceedings*, Vol. 564, p. 35, Materials Research Society, Beamline(s) X20C, 1999.
- X. Wang, *X-ray Studies of Ordering in Cu-Pd Long-Period Superlattice Alloys*, Ph.D. Thesis, Boston University, MA, USA, Beamline(s) X20C and X14A, 2001.
- X. Wang, K. Ludwig, O. Malis, J. Mainville, X. Flament, and R. Caudron, *Temperature Dependence of the Diffuse-Scattering Fine Structure in Cu-Pd Alloys*, *Phys. Rev. B*, Vol. 63, p. 092201, Beamline(s) X20C and X14A, 2001. [PR]
- ### Beamline X21
- G. Drager, T. Kirchner, S. Bocharov, and C. Kao, *Spin-resolved NEXAFS from resonant x-ray scattering (RXS)*, *J. Synch. Rad.*, Vol. 8, p. 398-400, Beamline(s) X21, 2001. [PR]
- J. Laukkanen, *Advanced experimental methods in Compton scattering spectroscopy*, Ph.D. Thesis, University of Helsinki, Finland, Beamline(s) X21, 2000.
- C. Sternemann, K. Hamalainen, A. Kaprolat, A. Soininen, G. Doring, C. Kao, S. Manninen, and W. Schulke, *Final state interaction in Compton scattering from electron liquids*, *Phys. Rev. B*, Vol. 62, p. R7687, Beamline(s) X21, 2000. [PR]
- ### Beamline X22A
- R. Heilmann, M. Fukuto, and P. Pershan, *Quenching of capillary waves in composite wetting films from a Binary vapor*, *Phys. Rev. B*, Vol. 63, p. 205405, Beamline(s) X22A, 2001. [PR]
- V. Kiryukhin, B. Kim, T. Katsufuji, J. Hill, and S. Cheong, *Nanoscale anisotropic structural correlations in the paramagnetic and ferromagnetic phases of Nd<sub>0.7</sub>Sr<sub>0.3</sub>MnO<sub>3</sub>*, *Phys. Rev. B*, Vol. 63, p. 144406, Beamline(s) X22A and X20A, 2001. [PR]
- V. Kiryukhin, B. Kim, V. Podzorov, S. Cheong, T. Koo, J. Hill, I. Moon, and Y. Jeong, *Multiphase segregation and metal-insulator transition in single crystal La(5/8-y)Pr(y)Ca(3/8)MnO<sub>3</sub>*, *Phys. Rev. B*, Vol. 63, p. 24420, Beamline(s) X22A, 2001. [PR]
- L. Lee, J. Wang, R. Adzic, I. Robinson, and A. Gewirth, *Adsorption Configuration and Local Ordering of Silicontungstate Anions on Ag(100) Electrode Surfaces*, *J. Am. Chem. Soc.*, Vol. 123, Issue 36, p. 8838-8843, Beamline(s) X22A, August 10, 2001. [PR]
- N. Marinkovic, J. Wang, J. Marinkovic, and R. Adzic, *Unusual adsorption properties of silver adlayers on the Pt(111) electrode surface*, *J. Phys. Chem. B*, Vol. 103, p. 139-144, Beamline(s) X22A, 1999. [PR]
- B. Ocko, I. Robinson, M. Weinert, R. Randler, and D. Kolb, *Thickness induced buckling of BCC copper films*, *Phys. Rev. Lett.*, Vol. 83, p. 780, Beamline(s) X22A, 2000. [PR/P]
- A. Vigliante, U. Gebhardt, A. Ruehm, P. Wochner, F. Razavi, and H. Habermeier, *Coupling between lattice distortions and magnetism in La<sub>0.9</sub>Sr<sub>0.1</sub>MnO<sub>3</sub> thin films*, *Europhys. Lett.*, Vol. 54, Issue 5, p. 619-625, Beamline(s) X22A, June 1, 2001. [PR]
- J. Wang, N. Marinkovic, H. Zajonz, B. Ocko, and R. Adzic, *In situ X-Ray Reflectivity and Voltammetry Study of Ru(0001) Surface Oxidation in Electrolyte Solutions*, *J. Phys. Chem. B*, Vol. 105, p. 2804-2814, Beamline(s) X22A, March 17, 2001. [PR]

Z. Zhang, D. Mitrinovic, S. Williams, and . et al, *X-ray scattering from monolayers of F(CF<sub>2</sub>)<sub>10</sub>(CH<sub>2</sub>)<sub>2</sub>H at the water-(hexane solution) and water-vapor interfaces*, *J. Chem. Phys.*, Vol. 110, Issue 15, p. 7421-7431, Beamline(s) X22A, 1999. [PR]

#### Beamline X22B

- D. Casa, B. Keimer, M. v.Zimmermann, J. Hill, H. Habermeier, and F. Razavi, *Unusual x-ray transport phenomena in La(1?x)Sr(x)MnO<sub>3</sub>*, *Phys. Rev. B*, Vol. 64, p. 100404-1, Beamline(s) X22B, 2001. [PR]
- K. Shin, M. Rafailovich, J. Sokolov, D. Chang, B. Lennox, A. Eisenberg, and S. Satija, *Observation of Surface Ordering of Alkyl Side Chains in Polystyrene/Polyelectrolytes Diblock Copolymer Langmuir Films*, *Langmuir*, Vol. 17, p. 4995, Beamline(s) X22B, 2001. [PR]
- E. Sloutskin, E. Sirota, H. Kraack, B. Ocko, and M. Deutsch, *Surface freezing in n-Alkane solutions: The relation of bulk phases*, *Phys. Rev. E*, Vol. 64, p. 31708, Beamline(s) X22B, 2001. [PR]
- J. Strzalka, *X-Ray Scattering Studies of Maquette peptide Monolayers*, Ph D Thesis, University of Pennsylvania, PA, USA, Beamline(s) X22B, 2000.
- J. Strzalka, X. Chen, C. Moser, P. Dutton, B. Ocko, and J. Blasie, *X-ray Structural Studies of Maquette Peptide Monolayers 1. Reflectivity and GID at the Air/Water Interface*, *Langmuir*, Vol. 16, p. 10404-10418, Beamline(s) X22B, December 2000. [PR]
- A. Tronin, J. Strzalka, X. Chen, P. Dutton, B. Ocko, and K. Blasie, *Reorientation of the alpha-helical synthetic peptide ZnBBC16 in a Langmuir monolayer*, *45th annual meeting of the American biophysical society*, Vol. 17, Issue 10, p. 3061-3066, Boston, MA, USA, Beamline(s) X22B, May 2001.
- D. Vaknin and M. Kelley, *The structure of D-Erythro-C18 Ceramide at the air-water interface*, *Biophys. J.*, Vol. 79, p. 2616-2623, Beamline(s) X22B, November 2000. [PR]
- D. Vaknin, M. Kelley, and B. Ocko, *Sphingomyelin at the air-water interface*, *J. Chem. Phys.*, Vol. 115, Issue 16, p. 7699, Beamline(s) X22B, 2001. [PR]
- S. Zheng, J. Strzalka, C. Ma, S. Opella, B. Ocko, and J. Blasie, *Structural Studies of the HIV-1 Accessory Protein Vpu in Langmuir Monolayers: Synchrotron X-ray Reflectivity*, *Biophys. J.*, Vol. 80, p. 1837-1850, Beamline(s) X22B, April 2001. [PR]

#### Beamline X22C

- D. Fong, *Stresses in Cu Thin Films and Ag/Ni Multilayers*, Ph.D. Thesis, Harvard University, MA, USA, Beamline(s) X22C, 2001.
- M. Longfield, W. Stirling, and G. Lander, *U(As<sub>1-x</sub>)Sex solid solutions. II. New magnetic phase for 0.18 < x < 0.22*, *Phys. Rev. B*, Vol. 63, p. 134402, Beamline(s) X22C, 2001. [PR]
- M. Longfield, W. Stirling, W. Lidstrom, D. Mannix, G. Lander, A. Stunault, A. McIntyre, K. Mattenberger, and O. Vogt, *U(As<sub>1-x</sub>)Sex solid solutions. I. Resonant x-ray and neutron scattering study of the magnetic phase diagram*, *Phys. Rev. B*, Vol. 63, p. 134401, Beamline(s) X22C, 2001. [PR]
- C. Nelson, M. von Zimmermann, Y. Kim, J. Hill, D. Gibbs, V. Kiryukhin, T. Koo, S. Cheong, D. Casa, et al., *Correlated Polarons in Dissimilar Perovskite Manganites*, *Phys. Rev. B: Condens. Matter*, Vol. 64, Issue 17, p. 6, Beamline(s) X22C, BNL Report No. 67887, November 1, 2001. [PR]
- R. Sarthour, J. Goff, D. McMorrow, A. Stunault, E. Lidstrom, A. Vigliante, R. Ward, and M. Wells, *Induced Magnetic Order in Nd/Pr Superlattices*, *J. Magn. Magn. Mater.*, Vol. 288, p. 198, Beamline(s) X22C, 1999. [PR]

H. Zajonz, A. Baddorf, D. Gibbs, and D. Zehner, *Structure of Pseudomorphic and reconstructed thin Cu films on Ru*, *Phys. Rev. B*, Vol. 62, p. 10436, Beamline(s) X22C, 2000. [PR]

#### Beamline X23A2

- F. Alamgir, Y. Ito, H. Jain, and D. Williams, *Extended energy-loss fine structure analysis of 3d transition metals using L ionization edges*, *Philos. Mag. Lett.*, Vol. 81, Issue 3, p. 213-222, Beamline(s) X23A2 and X15B, 2001. [PR]
- G. Fryxell, Y. Lin, S. Mattigod, H. Wu, S. Fiskum, T. Zemanian, K. Kemner, J. Birnbaum, and S. Kelly, *Separation and stabilization of radionuclides using self-assembled monolayers on mesoporous supports*, *22nd American Chemical Society Meeting*, Vol. 41, Issue 2, ACS, Washington, DC, USA, Beamline(s) X23A2, 2001.
- S. Kelly, K. Kemner, G. Fryxell, J. Liu, and S. Mattigod, *X-ray absorption fine structure spectroscopy determination of the binding mechanism of tetrahedral anions to self assembled monolayers on mesoporous support*, *J. Synch. Rad.*, Vol. 8, p. 922-924, Beamline(s) X23A2, 2001. [PR]
- S. Kelly, K. Kemner, G. Fryxell, J. Liu, S. Mattigod, and K. Ferris, *X-Ray-Absorption Fine-Structure Spectroscopy Study of the Interactions between Contaminant Tetrahedral Anions and Self-Assembled Monolayers on Mesoporous Supports*, *J. Phys. Chem. B*, Vol. 105, Issue 27, p. 6337-6346, Beamline(s) X23A2, June 2001. [PR]
- B. McClaine, S. Siporin, and R. Davis, *X-ray and IR Spectroscopy of Barium-Promoted, Zeolite-Supported Ruthenium Catalysts for Ammonia Synthesis*, *J. Phys. Chem. B*, Vol. 105, Issue 31, p. 7525-7532, Beamline(s) X23A2 and X10C, 2001. [PR]
- D. McKeown, I. Muller, A. Buechele, and I. Pegg, *Local Environment of Zr in High Zirconia Boro-Silicate Waste Glass Formulations*, *J. Non-Cryst. Solids*, Vol. 258, p. 98-109, Beamline(s) X23A2, 2000. [PR]
- D. McKeown, I. Muller, A. Buechele, and I. Pegg, *Local Environment of Zn in Zirconium Borosilicate Glasses Determined by X-Ray Absorption Spectroscopy*, *J. Non-Cryst. Solids*, Vol. 261, p. 155-162, Beamline(s) X23A2, 2000. [PR]
- D. McKeown and J. Post, *Determination of Mn oxides within desert varnish and dendritic coatings on rock substrates using X-ray absorption spectroscopy*, *Am. Mineral.*, Vol. 86, p. 701-713, Beamline(s) X23A2, 2001. [PR]
- A. Ponchel, G. Hug, and M. Jaouen, *Study of the local atomic strain field in a Zr-doped TiAl intermetallic alloy by EXAFS and ab initio FLAPW calculations*, *Ultramicroscopy*, Issue 86, p. 265-272, Beamline(s) X23A2, March 2001. [PR]
- B. Ravel, E. Cockayne, and K. Rabe, *The local structure of ferroelectric Pb<sub>1-x</sub>GexTe*, *J. Synch. Rad.*, Vol. 6, p. 567-569, Beamline(s) X23A2, 1999. [PR]
- A. Sahiner, S. Novak, J. Woicik, J. Liu, and V. Krishnamoorthy, *Arsenic Clustering and Precipitation Analysis in Ion-implanted Si Wafers by X-ray Absorption Spectroscopy and SIMS*, *Ion Implantation Technology-2000*, Vol. 00EX432, p. 600-603, sponsored by IEEE, IEEE, Piscataway, NJ, USA, Beamline(s) X23A2, 2000.

#### Beamline X23B

- J. Cross and A. Frenkel, *Use of scattered radiation for absolute x-ray energy calibration*, *Rev. Sci. Instrum.*, Vol. 70, Issue 1, p. 38-40, Beamline(s) X23B and X16C, 1999. [PR]

G. Evmenenko, M. van der Boom, J. Kmetko, S. Dugan, T. Marks, and P. Dutta, *Specular X-Ray Reflectivity Study of Ordering in Self-Assembled Organic and Organic-Inorganic Electro-Optic Multilayer Films*, *J. Chem. Phys.*, Vol. 115, Issue 14, p. 6722-6727, Beamline(s) X23B, October 8, 2001. [PR]

#### Beamline X24A

G. Cappello, A. Dechelette, F. Schmithusen, S. Decossas, J. Chevrier, F. Comin, V. Formoso, M. deBoissieu, T. Jach, et al., *Bold And Surface Evidence for the Long Range Spatial Modulation of X-Ray Absorption in the AlPdMn Quasicrystal at Bragg Incidence*, *Mater. Sci. Eng. A*, Vol. 294-296, p. 863-866, Beamline(s) X24A, Dec 2000. [PR]

T. Jach, *Quasicrystal Element Correlations from X-Ray Standing Waves*, *Mater. Sci. Eng. A*, Vol. 294-296, p. 315-318, Beamline(s) X24A, Dec 2000. [PR]

T. Jach and E. Landree, *Grazing Incidence X-Ray Photoemission Spectroscopy and the Accuracy of Thickness Measurements of CMOS Gate Dielectrics*, *Surf. Interface Anal.*, Vol. 31, p. 768, Beamline(s) X24A, Sept 2001. [PR]

#### Beamline X24C

N. Lanier, S. Gerhardt, and D. Den Hartog, *Low-cost, robust, filtered spectrometer for absolute intensity measurements in the soft x-ray region*, *Rev. Sci. Instrum.*, Vol. 72, Issue 1, p. 1188-1191, Beamline(s) X24C, January 2001. [PR]

J. Long, S. Chase, and M. Kabler, *Excited-state Photoelectron Spectroscopy of Excitons in C60 and Photopolymerized C60*, *Phys. Rev. B*, Vol. 64, p. 205415, Beamline(s) X24C, November 2001. [PR]

J. Long, S. Chase, and M. Kabler, *Photoelectron Spectroscopy and Dynamics of Excitons in C60 and Photopolymerized C60 Films*, *Chem. Phys. Lett.*, Vol. 347, p. 29-35, Beamline(s) X24C, October 2001. [PR]

C. Montcalm, S. Bajt, and J. Seely, *MoRu-Be multilayer-coated grating with 10.4% normal-incidence efficiency near the 11.4-μm wavelength*, *Opt. Lett.*, Vol. 26, Issue 3, p. 125, Beamline(s) X24C, February 01, 2001. [PR]

J. Seely, *Multilayer Grating for the Extreme Ultraviolet Spectrometer*, Vol. 4138, p. 174-181, SPIE, Beamline(s) X24C, 2000.

J. Weaver, G. Holland, U. Feldman, J. Seely, C. Brown, V. Serlin, A. Deniz, and M. Klapisch, *The Determination of Absolutely Calibrated Spectra from Laser Produced Plasmas Using a Transmission Grating Spectrometer at the NIKE Laser Facility*, *Plasma Phys. Controlled Fusion*, Vol. 72, p. 108, Beamline(s) X24C, 2001. [PR]

#### Beamline X25

G. Arjara, M. Sintchak, C. Lawrence, B. Kellogg, J. Stubbe, and C. Drennan, *Crystallization of ribonucleotide-triphosphate reductase*, *American Society for Biochemistry and Molecular Biology*, Vol. 14, p. 1382, sponsored by FASEB, FASEB JOURNAL, Bethesda, MD, USA, Beamline(s) X25, 2000.

U. Bergmann, P. Glatzel, J. Robblee, J. Messinger, C. Fernandez, R. Cinco, H. Visser, K. McFarlane, E. Bellacchio, and S. Pizarro, *High-resolution X-ray spectroscopy of rare events: a different look at local structure and chemistry*, *J. Synch. Rad.*, Vol. 8, p. 199-203, Beamline(s) X25, March 2001. [PR]

J. Chai, Q. Wu, E. Shiozaki, S. Srinivasula, E. Alhemri, and Y. Shi, *Crystal Structure of a Pro caspase-7 Zymogen: Mechanisms of Activation and Substrate Binding*, *Cell*, Vol. 107, p. 399-407, Beamline(s) X25, November 6, 2001. [PR/P]

G. Cheetham and T. Steitz, *Structure of a transcribing T7 RNA polymerase initiation complex*, *Science*, Vol. 286, Issue 5448, p. 2305-2309, Beamline(s) X25, December 17, 1999. [PR/P]

D. Das and M. Georgiadis, *A directed approach to improving the solubility of Moloney murine leukemia virus reverse transcriptase*, *Protein Sci.*, Vol. 10, p. 1936-1941, Beamline(s) X25, 2001. [PR]

R. Diamant, S. Huotari, K. Hamalainen, R. Sharon, C. Kao, and M. Deutsch, *The W La1,2 X-Ray Emission Spectrum*, *Phys. Rev. A*, Vol. 63, p. 22508, Beamline(s) X25, 2001. [PR]

E. DiMasi, H. Tostmann, B. Ocko, P. Huber, O. Shpyrko, P. Pershan, M. Deutsch and L. Berman, *Pairing Interactions and Gibbs Adsorption at the Liquid Bi-In Interface: A Resonant X-ray Reflectivity Study*, *Phys. Rev. Lett.*, Vol. 86, p. 1538-1541, Beamline(s) X25, 2001. [PR/P]

C. Drennan, J. Heo, M. Sintchak, E. Schreiter, and P. Ludden, *Life on carbon monoxide: X-ray structure of Rhodospirillum rubrum Ni-Fe-S carbon monoxide dehydrogenase*, *Proc Natl Acad Sci USA*, Vol. 98, Issue 21, p. 11973-11978, Beamline(s) X25, October 9, 2001. [PR/P]

T. Edwards, S. Pyle, R. Wharton, and A. Aggarwal, *Structure of Pumilio Reveals Similarity between RNA and Peptide Binding Motifs*, *Cell*, Vol. 105, p. 281-289, Beamline(s) X25, April 2001. [PR/P]

M. Faig, M. Bianchet, S. Winski, C. Moody, A. Hudnott, D. Ross, and L. Amzel, *Structure-Based Development of Anticancer Drugs: Complexes of NAD(P)H:Quinone Oxidoreductase 1 with Chemotherapeutic Quinones*, *Structure Fold. Des.*, Vol. 9, Issue 8, p. 659-667, Beamline(s) X25 and X4A, August 15, 2001. [PR]

Q. Fan, E. Long, and D. Wiley, *Crystal structure of the human natural killer cell inhibitory receptor KIR2DL1-HLA-Cw4 complex*, *Nat. Immunol.*, Vol. 2, p. 452-460, Beamline(s) X25, May 2001. [PR]

S. Gabelli, *The structure of the ADP-ribose pyrophosphatase reveals the versatility of the Nudix hydrolases*, PhD Thesis, Johns Hopkins University, Maryland, USA, Beamline(s) X25 and X8C, 2000.

S. Gabelli, M. Bianchet, M. Bessman, and L. Amzel, *The structure of ADP-ribose pyrophosphatase reveals the structural basis for the versatility of the Nudix family*, *Nat. Struct. Biol.*, Vol. 8, Issue 5, p. 467-472, Beamline(s) X25 and X8C, May 2001. [PR/P]

B. Han, W. Nunomura, Y. Takakuwa, N. Mohandas, and B. Jap, *Protein 4.1R core domain structure and insights into regulation of cytoskeletal organization*, *Nat. Struct. Biol.*, Vol. 7, Issue 10, p. 871-874, Beamline(s) X25, October 2000. [PR/P]

M. Han, V. Gurevich, S. Vishnivetskiy, P. Sigler, and C. Schubert, *Crystal Structure of β-arrestin at 1.9 Å: Possible Mechanism of receptor binding and membrane translocation*, *Structure*, Vol. 9, Issue 9, p. 869-880, Beamline(s) X25 and X12B, September 2001. [PR/P]

T. Hollis, J. Stattel, D. Walther, C. Richardson, and T. Ellenberger, *Structure of the gene 2.5 protein, a single-stranded DNA binding protein encoded by bacteriophage T7*, *Proc Natl Acad Sci USA*, Vol. 98, Issue 17, p. 9557-9562, Beamline(s) X25 and U13UA, August 14, 2001. [PR/P]

S. Johnston, S. Riddle, R. Cohen, and C. Hill, *Structural Basis for the Specificity of Ubiquitin C-Terminal Hydrolases*, *EMBO J.*, Vol. 18, p. 3877-3887, Beamline(s) X25, 1999. [PR/P]

E. Lamani, D. McPherson, S. Hollingshead, and M. Jedrzejas, *Production Characterization and Crystallization of Truncated Forms of Pneumococcal Surface Protein A from Escherichia coli*, *Protein Expr. Purif.*, Vol. 20, Issue 3, p. 379-388, Beamline(s) X25, December 2000. [PR]

- A. Lau, M. Wyatt, B. Glassner, L. Samson, and T. Ellenberger, *Molecular Basis for Discriminating Between Normal and Damaged Bases by the Human Alkyladenine Glycosylase AAG*, *Proc. Natl. Acad. Sci. USA*, Vol. 97, p. 13573-13578, Beamline(s) X25, 2000.
- S. Li, K. Taylor, S. Kelly, and M. Jedrzejas, *Vitamin C Inhibits the Enzymatic Activity of Streptococcus Pneumoniae Hyaluronate Lyase*, *J. Biol. Chem.*, Vol. 276, Issue 18, p. 15125-30, Beamline(s) X25, May 4, 2001. [PR]
- C. Lukacs, R. Kucera, I. Schildkraut, and A. Aggarwal, *Structure of free BgIII reveals an unprecedented scissor-like motion for opening an endonuclease*, *Nat. Struct. Biol.*, Vol. 8, Issue 2, p. 126-30, Beamline(s) X25, February 2001. [PR/P]
- P. Moore, *The ribosome at atomic resolution*, *Biochemistry*, Vol. 40, Issue 11, p. 3243-3250, Beamline(s) X25 and X12B, March 2001. [PR]
- J. Morais-Cabral, Y. Zhou, and R. MacKinnon, *Energetic optimization of ion conduction rate by the K<sup>+</sup> selectivity filter*, *Nature*, Vol. 414, p. 37-42, Beamline(s) X25, November 2001. [PR/P]
- P. Nissen, J. Hansen, N. Ban, P. Moore, and T. Steitz, *The structural basis of ribosome activity in peptide bond synthesis*, *Science*, Vol. 289, Issue 5481, p. 920-929, Beamline(s) X25 and X12B, August 11, 2000. [PR/P]
- A. Olland, J. Jané-Valbuena, L. Schiff, M. Nibert, and S. Harrison, *Structure of the reovirus outer capsid and dsRNA-binding protein sigma3 at 1.8 Å resolution*, *EMBO J.*, Vol. 20, Issue 5, p. 979-989, Beamline(s) X25, March 1, 2001. [PR/P]
- N. Ostermann, I. Schlichting, R. Brundiers, M. Konrad, J. Reinstein, T. Veit, R. Goody, and A. Lavie, *Insights into the phosphoryltransfer mechanism of human thymidylate kinase gained from crystal structures of enzyme complexes along the reaction coordinate*, *Structure*, Vol. 8, p. 629-642, Beamline(s) X25, 2000. [PR/P]
- C. Phillips, B. Ullman, R. Brennan, and C. Hill, *Crystal Structure of Adenine Phosphoribosyltransferase from L. donovani*, *EMBO J.*, Vol. 18, p. 3533-3545, Beamline(s) X25, 1999. [PR/P]
- K. Pratt, B. Shen, K. Takeshima, E. Davie, K. Fujikawa, and B. Stoddard, *Structure of the C2 domain of human actin VIII at 1.5 Å resolution*, *Nature*, Vol. 402, p. 439-442, Beamline(s) X25, November 25, 1999. [PR/P]
- V. Ramakrishnan and P. Moore, *Atomic structures at last: the ribosome in 2000*, *Curr. Opin. Struct. Biol.*, Vol. 11, p. 144-154, Beamline(s) X25 and X12B, April 2001. [PR]
- F. Rastinejad, T. Wagner, Q. Zhao, and S. Khorasanizadeh, *Structure of the RXR-RAR DNA-binding complex on the retinoic acid response element DR1*, *EMBO J.*, Vol. 19, Issue 5, p. 1045-54, Beamline(s) X25, March 1, 2000. [PR/P]
- M. Renatus, Q. Zhou, H. Stennicke, S. Snipas, D. Turk, L. Bankston, R. Liddington, and G. Salvesen, *Crystal structure of the apoptotic suppressor CrmA in its cleaved form*, *Structure Fold. Des.*, Issue 8, p. 789-797, Beamline(s) X25, July 15, 2000. [PR]
- S. Sarafianos, K. Das, C. Tantillo, A. Clark, J. Ding, J. Whitcomb, P. Boyer, S. Hughes, and E. Arnold, *Crystal structure of HIV-1 reverse transcriptase in complex with a polypurine tract RNA:DNA*, *EMBO J.*, Vol. 20, Issue 6, p. 1449-1461, Beamline(s) X25, March 15, 2001. [PR/P]
- L. Silvian, E. Toth, P. Pham, M. Goodman, and T. Ellenberger, *Crystal structure of a DinB family error-prone DNA polymerase from Sulfolobus solfataricus*, *Nat. Struct. Biol.*, Vol. 8, Issue 11, p. 984, Beamline(s) X25 and X12C, November 2001. [PR/P]
- G. Szakonyi, J. Guthridge, D. Li, K. Young, M. Holers, and X. Chen, *Structure of Complement Receptor Type 2 in Complex with its Ligand C3d*, *Science*, Vol. 272, p. 1725-1728, Beamline(s) X25 and X4A, June 1, 2001. [PR/P]
- M. Thunnissen, P. Nordlund, and J. Saeggstrom, *Crystal structure of human leukotriene A(4) hydrolase, a bifunctional enzyme in inflammation*, *Nat. Struct. Biol.*, Vol. 8, Issue 2, p. 131-5, Beamline(s) X25, February 2001. [PR/P]
- F. von Delft, A. Lewendon, V. Dhanaraj, T. Blundell, C. Abell, and A. Smith, *The Crystal Structure of E. coli Pantothenate Synthetase Confirms it as a Member of the Cytidyl Superfamily, Structure*, Vol. 9, p. 1-20, Beamline(s) X25, May 2001. [PR/P]
- J. Walker, R. Corpina, and J. Goldberg, *Structure of the Ku heterodimer bound to DNA and its implications for double-strand break repair*, *Nature*, Vol. 412, p. 607-614, Beamline(s) X25 and X9A, August 9, 2001. [PR/P]
- S. Wang, G. Kim, and D. Gewirth, *Structural studies of a yeast quaternary transcription-initiation complex*, *Acta Cryst. D*, Vol. 57, Issue 3, p. 441-444, Beamline(s) X25, March 1, 2001. [PR]
- F. Whitby, E. Masters, L. Kramer, J. Knowlton, Y. Yao, C. Wang, and C. Hill, *Structural Basis for the Activation of Proteasomes by 11S Regulators*, *Nature*, Vol. 408, p. 115-120, Beamline(s) X25, 2000. [PR/P]
- D. Worthylake, S. Prakash, L. Prakash, and C. Hill, *Crystal Structure of the Ubiquitin Conjugating Enzyme RAD6 at 2.6 Å Resolution*, *J. Biol. Chem.*, Vol. 273, p. 6271-6276, Beamline(s) X25, 1998. [PR]
- B. Zhou, J. Pata, and T. Steitz, *Crystal Structure of a DinB Lesion Bypass DNA Polymerase Catalytic Fragment Reveals a Classic Polymerase Catalytic Domain*, *Mol. Cell.*, Vol. 8, p. 427-437, Beamline(s) X25 and X12C, August 2001. [PR]
- M. Zhou, J. Morais-Cabral, S. Mann, and R. MacKinnon, *Potassium channel receptor site for the inactivation gate and quaternary amine inhibitors*, *Nature*, Vol. 411, p. 657-661, Beamline(s) X25, June 7, 2001. [PR/P]

## Beamline X26A

- Y. Zhou, J. Morais-Cabral, A. Kaufman, and R. MacKinnon, *Chemistry of ion coordination and hydration revealed by a K<sup>+</sup> channel-Fab complex at 2.0 Å resolution*, *Nature*, Vol. 414, p. 43-48, Beamline(s) X25, November 2001. [PR/P]
- J. Bender, M. Duff, P. Phillips, and M. Hill, *Bioremediation and Bioreduction of U(VI) in Groundwaters by Microbial Mats*, *Environ. Sci. Tech.*, Vol. 34, p. 3235-3241, Beamline(s) X26A, 2000. [PR]
- P. Bertsch and D. Hunter, *Applications of synchrotron-based x-ray micropores*, *Chem. Rev.*, Vol. 101, Issue Number 6, p. 1809-1842, Beamline(s) X26A, June 2001. [PR]
- P. Bertsch, D. Hunter, and M. Duff, *Micro-Scale Controls on Biogeochemical Reactivity in Natural Systems: A Microspectroscopic View*, (invited paper), *Surface Chemical Processes in Natural Environments*, October 1-6, 2000, Ascona, Switzerland, Beamline(s) X26A, 2000.
- E. Chouparova, H. Feng, A. Lanzilotti, and K. Jones, *Trace metal distributions in rod wax deposits formed in an oil-producing well, Anadarko Basin, Oklahoma*, *Seventh Annual International Petroleum Environmental Conference*, Albuquerque, NM, Beamline(s) X26A, 2000.
- J. Delaney, S. Sutton, M. Newville, J. Jones, B. Hanson, M. Dyar, and H. Schreiber, *Synchrotron micro-XANES measurements of Vanadium oxidation state in Glasses as a function of oxygen fugacity*, *Proceedings of 32nd Lunar and Planetary Science Conference*, Houston, TX, March 12-16, 2001, Beamline(s) X26A, 2001.
- M. Duff, *Speciation and Transformations of Sorbed Pu on Geologic Materials: Wet Chemical and Spectroscopic Observations*, *Radioactivity in the Environment*, Series 1, Vol. 1, A. Kudo (Ed.) Elsevier Sci. Limited, New York, NY, USA, p. 139-157, Beamline(s) X26A, 2001.

- M. Duff, D. Hunter, I. Triay, P. Bertsch, S. Sutton, J. Kitten, and D. Vaniman, *Comparison of Two Micro-Analytical Methods for Detecting the Spatial Distribution of Sorbed Pu on Geologic Materials*, *Radiochim. Acta*, Vol. 47, p. 211-218, Beamline(s) X26A, 2000. [PR]
- J. Fredrickson, J. Zachara, D. Kennedy, M. Duff, Y. Gorby, S. Li, and K. Krupka, *Reduction of U(VI) in Goethite (aFeOOH) Suspensions by a Dissimilatory Metal-Reducing Bacterium*, *Geochim. Cosmochim. Acta*, Vol. 64, p. 3085-3098, Beamline(s) X26A, 2000. [PR]
- C. Guest, *Manganese transformations in soils during waterlogging and subsequent drying*, Ph.D. Thesis, Purdue University, IN, Beamline(s) X26A, 2001.
- K. Jones, *Application of Synchrotron Radiation in the Geological and Environmental Sciences*, *Microscopic X-ray Fluorescence Analysis*, K. Janssens, A. Rindby, and F. Adams (Ed.) J. Wiley & Sons, Sussex, England, p. 247-290, Beamline(s) X26A, 2000.
- K. Jones, *Synchrotron Radiation-induced X-ray Emission, Handbook of X-ray Spectrometry: Second Edition, Revised*, Vol. 8, R. van Grieken and A. Markowicz (Ed.) Dekker, Inc., NY, NY, USA, p. 501-558, Beamline(s) X26A, 2001.
- K. Jones and H. Feng, *Microanalysis of materials using synchrotron radiation, Chemical Applications of Synchrotron Radiation*, T.K. Sham (Ed.) World Scientific Pub. Co., NJ, USA, Beamline(s) X26A, 2001.
- W. Kwiatek, B. Kubica, and M. Galka, *Trace element analysis by means of synchrotron radiation, XRF, and PIXE: selection of sample preparation procedure*, *J. Alloys Compd.*, Vol. 328, p. 283-288, Beamline(s) X26A, 2001. [PR]
- K. McCall, A. Lanzirotti, and E. Rasbury, *Trace Element Incorporation in Caliche Paleosols*, *V.M. Goldschmidt Conference*, Vol. 11, Issue 1, p. 3667, sponsored by Geochemical Society, Lunar and Planetary Institute, Houston, TX, USA, Beamline(s) X26A, 2001.
- S. Naftel, R. Martin, T. Sham, S. Macfie, and K. Jones, *Micro-synchrotron x-ray fluorescence of cadmium-challenged corn roots*, *J. Electron. Spectrosc. Relat. Phenom.*, Vol. 119, p. 235-239, Beamline(s) X26A, 2001. [PR]
- C. Paluszakiewicz and W. Kwiatek, *Analysis of Human cancer prostate tissues using FTIR microspectroscopy and SRIXE techniques*, *J. Mol. Struct.*, Vol. 565-566, p. 329-334, Beamline(s) X26A, 2001. [PR]
- T. Pfister, H. Feng, E. Wimmer, and K. Jones, *Synchrotron Radiation-Induced X-Ray Emission to Identify Metal Ions in Preparations of Purified Protein*, *BioTechniques*, Vol. 31, Issue 6, p. 2-7, Beamline(s) X26A, December 2001. [PR]
- J. Rakovan, M. Newville, and S. Sutton, *Wavelength dispersive XANES of heterovalent*, *Am. Mineral.*, Vol. 86, p. 697-700, Beamline(s) X26A, May 2001. [PR]
- R. Ravelli, M. Raves, S. Scheres, A. Schouten, and J. Kroon, *Ab initio structure determination of low-molecular-weight compounds using synchrotron radiation Laue diffraction*, *J. Synch. Rad.*, Vol. 6, p. 19-28, Beamline(s) X26A, 1999. [PR]
- R. Reeder, M. Nugent, C. Tait, D. Morris, S. Heald, K. Beck, W. Hess, and A. Lanzirotti, *Coprecipitation of Uranium (VI) with Calcite: XAFS, micro-XAS, and luminescence characterization*, *Geochim. Cosmochim. Acta*, Vol. 65, Issue 20, p. 3491-3503, Beamline(s) X26A and X11A, October 15, 2001. [PR]
- D. Ross, H. Hales, G. Shea-McCarthy, and A. Lanzirotti, *Sensitivity of soil Mn oxides: drying and storage cause reduction*, *Soil Sci. Soc. Am. J.*, Vol. 65, p. 736-743, Beamline(s) X26A, May 2001. [PR]
- D. Ross and C. Negra, *Association of lead with soil manganese oxides*, *Sixth International Conference on the Biogeochemistry of Trace Elements*, p. 47, sponsored by Ontario Power Generation, ICOBTE 2001, Guelph, Ontario, Canada, Beamline(s) X26A, 2001.
- T. Sham, R. Martin, K. Jones, R. Protz, W. Skinner, and B. Hale, *Secondary ion mass spectrometry and synchrotron x-ray fluorescence in dendroanalysis: molecular environmental science*, *Presented at 8th European conference on applications of surface and interface analysis*, Sevilla, SPAIN, Beamline(s) X26A, 1999.
- S. Walker, H. Jamieson, G. Hall, S. Sutton, and A. Lanzirotti, *Application of micro-XANES to the speciation of As-bearing solids in mine waste from Yellowknife*, (invited paper), NRCan Synchrotron Workshop, p. 8, sponsored by Natural Resources Canada, Ottawa, Ontario, Canada, Beamline(s) X26A, 2001.
- Z. Wu, M. Bonnin-Mosbah, J. Duraud, N. Metrich, and J. Delaney, *XANES studies of Fe-bearing glasses*, *J. Synch. Rad.*, Vol. 6, p. 344-346, Beamline(s) X26A, 1999. [PR]
- D. Xirouchakis, D. Draper, and C. Schwandt, *A reappraisal of the Mineralogy and Crystallization Features of Los Angeles, a basaltic Martian meteorite*, *Lunar and Planetary Science Conference*, Vol. 32, p. abstract 1681, sponsored by Lunar and Planetary Institute and NASA JSC, Lunar and Planetary Institute, Houston, TX, USA, Beamline(s) X26A, 2001.

## Beamline X26C

- J. Carrodeguas, K. Theis, D. Bogenhagen, and C. Kisker, *Crystal structure and deletion analysis show that the accessory subunit of mammalian DNA polymerase  $\eta$ , PolgB, functions as a homodimer*, *Mol. Cell*, Vol. 7, Issue 1, p. 43-54, Beamline(s) X26C, January 2001. [PR]
- A. Dong, J. Joder, X. Zhang, L. Zhou, T. Bestor, and X. Cheng, *Structure of the human DNMT2, an enigmatic DNA methyltransferase homolog that displays denaturant-resistant binding to DNA*, *Nucleic Acids Res.*, Vol. 29, Issue 2, p. 439-448, Beamline(s) X26C, January 15, 2001. [PR]
- D. Himmel, *Structural Studies on the Myosin Molecular Motor: A) Evidence for a "Detached" ATP State, and B) Comparison of Calcium-Bound and Calcium-Free Regulatory Domains*, published in *University Microfilms International*, February, 2001, Ph.D. Thesis, Brandeis University, Massachusetts, USA, Beamline(s) X26C and X12C, 2001.
- S. Howerton, C. Sines, D. Vanderveer, and L. Williams, *Locating Monovalent Cations in the Grooves of B-DNA*, *Biochemistry*, Vol. 40, Issue 34, p. 10023-10031, Beamline(s) X26C, August 28, 2001. [PR]
- J. Jiang, D. Horowitz, and R. Xu, *Crystal structure of the functional domain of the splicing factor Prp18*, *Proc. Natl. Acad. Sci. USA*, Vol. 97, Issue 7, p. 3022-3027, Beamline(s) X26C, 2000.
- J. Jiang, Y. Zhang, A. Krainer, and R. Xu, *Crystal structure of human p32, a doughnut-shaped acidic mitochondrial matrix protein*, *Proc. Natl. Acad. Sci. USA*, Vol. 96, Issue 7, p. 3572-3577, Beamline(s) X26C, 1999.
- M. Lake, C. Temple, K. Rajagopalan, and H. Schindelin, *the Crystal Structure of the Escherichia coli Mba protein provides insight into molybdopterin guanine dinucleotide biosynthesis*, *J. Biol. Chem.*, Vol. 275, p. 40211-40217, Beamline(s) X26C, 2000. [PR]
- M. Lake, M. Wuebbens, K. Rajagopalan, and H. Schindelin, *Mechanism of Ubiquitin Activation Revealed by the Structure of a Bacterial MoeB-MoaD Complex*, *Nature*, Vol. 414, p. 325-329, Beamline(s) X26C, November 15, 2001. [PR/P]

- J. Min, J. Landry, R. Sternglanz, and R. Xu, *Crystal Structure of a SIR2 Homolog-NAD Complex*, *Cell*, Vol. 105, Issue 2, p. 269-279, Beamline(s) X26C and X12C, April 20, 2001. [PR/P]
- Z. Ren, D. Bourgeois, J. Helliwell, K. Moffat, V. Srajer, and B. Stoddard, *Laue crystallography: coming of age*, *J. Synch. Rad.*, Vol. 6, p. 891-917, Beamline(s) X26C, 1999. [PR]
- M. Rudolph, M. Wuebbens, K. Rajagopalan, and H. Schindelin, *Crystal Structure of Molybdopterin Synthase and its Evolutionary Relationship to Ubiquitin-activation*, *Nat. Struct. Biol.*, Vol. 8, p. 42-46, Beamline(s) X26C and X12C, 2001. [PR/P]
- G. Schwarz, N. Schrader, R. Mendel, H. Hecht, and H. Schindelin, *Crystal Structures of Human Gephyrin and Plant Cnx1 G Domains-Comparative Analysis and Functional Implications*, *J. Mol. Biol.*, Vol. 312, p. 405-418, Beamline(s) X26C, 2001. [PR]
- J. Seely, C. Brown, G. Holland, J. Hanser, J. Wise, J. Weaver, R. Korde, R. Viereck, R. Grubb, and D. Judge, *Calibration of an Extreme Ultraviolet Transmission Grating Spectrometer using Synchrotron Radiation*, *Appl. Optics-OT*, Vol. 40, p. 1623, Beamline(s) X26C, 2001. [PR]
- C. Sines, L. McFail-Isom, S. Howerton, D. VanDerVeer, and L. Williams, *Cations Mediate B-DNA Conformational Heterogeneity*, *J. Am. Chem. Soc.*, Vol. 122, Issue 45, p. 11048-11056, Beamline(s) X26C, November 15, 2000. [PR]
- K. Theis, M. Skorvaga, M. Machius, N. Nakagawa, B. Van Houten, and C. Kisker, *The nucleotide excision repair protein UvrB, a helicase-like enzyme with a catch*, *Mutat. Res.*, Vol. 460, Issue 3-4, p. 277-300, Beamline(s) X26C, August 30, 2000. [PR]
- G. Vilkaitis, A. Dong, E. Weinhold, X. Cheng, and S. Kilmasauskas, *Functional roles of the conserved threonine-250 in the target recognition domain of Hhal DNA methyltransferase*, *J. Biol. Chem.*, Vol. 275, p. 38722-38730, Beamline(s) X26C, 2000. [PR]
- S. Xiang, J. Nichols, K. Rajagopalan, and H. Schindelin, *The crystal structure of Escherichia coli MoeA and its relationship to the multifunctional protein gephyrin*, *Structure*, Vol. 9, p. 299-310, Beamline(s) X26C and X12B, March 2001. [PR/P]
- T. Yoon, S. Tétreault, H. Bosshard, R. Sweet, and J. Sygusch, *Mosaic spread analysis of Canadian advanced protein crystallization experiment on the Russian space station, Mir*, *J. Cryst. Growth*, Vol. 232, Issue (1-4), p. 520-535, Beamline(s) X26C, November 2001. [PR]
- Z. Zhang, R. Zhang, A. Joachimiak, J. Schlessinger, and X. Kong, *Crystal structure of the human stem cell factor: implication for stem cell factor dimerization and activation*, *Proc. Natl. Acad. Sci. USA*, Vol. 97, Issue 14, p. 7732-7737, Beamline(s) X26C, 2000.
- Beamline X27A**
- R. Astheimer, K. Bennett, G. Brown, J. Hoy, K. Jones, N. Sturchio, S. Sutton, G. Waychunas, and N. Woodward, *Inside rocks*, *Geotimes*, p. 20-23, Beamline(s) X27A, November 2000.
- K. Jones and H. Feng, *Synchrotron computed microtomography (CMT) investigation of the microstructure of geological materials*, *Sixteenth International Conference on the Application of Accelerators in Research and Industry*, sponsored by University of North Texas, Denton, Texas, USA, Beamline(s) X27A, 2000.
- K. Jones, H. Feng, E. Tchouparova, W. Lindquist, P. Adler, J. Thovert, B. Vekemans, L. Vincze, I. Szalok, and C. Riekel, *Study of the microgeometry of porous materials using synchrotron computed microtomography*, *European Union of Geosciences EUG XI Conference*, p. 115, sponsored by European Union of Geosciences, Strasbourg, France, Beamline(s) X27A, 2000.
- T. Pfister, K. Jones, and E. Wimmer, *A Cysteine-Rich Motif in Poliovirus Protein 2C(ATPase) Is Involved in RNA Replication and Binds Zinc In Vitro*, *J. Virology*, Vol. 74, Issue 1, p. 334-343, Beamline(s) X27A, 2000. [PR]
- W. Thissell, D. Macdougall, D. Miller, K. Simmonds, R. Everett, P. Matic, R. Brooks, and D. Tonks, *Quantitative Damage Evolution in Incipiently Failed 10100 Cu*, *J. Phys. IV*, Vol. 10, Issue 9, p. 299-304, Beamline(s) X27A, September 2000. [PR]
- Beamline X27C**
- S. Andjelic, D. Jamolkowski, J. McDivitt, J. Fischer, J. Zhou, Z. Wang, and B. Hsiao, *Time-resolved crystallization study of absorbable polymers by synchrotron small-angle X-ray scattering*, *J. Polym. Sci., Part B: Polym. Phys.*, Vol. 39, Issue 1, p. 153-167, Beamline(s) X27C, Jan 2001. [PR]
- I. Chin, T. Thurn-Albrecht, H. Kim, and T. Russell, *Exfoliation of Montmorillonites in Epoxy*, *Meeting of the American Chemical Society*, Vol. 219, Issue 2, p. 386, sponsored by ACS, Beamline(s) X27C, 2000.
- I. Chin, T. Thurn-Albrecht, H. Kim, T. Russell, and J. Wang, *Exfoliation of Montmorillonite in Epoxy*, *Polymer*, Vol. 42, p. 5942, Beamline(s) X27C, 2001. [PR]
- F. Chiu, Q. Wang, Q. Fu, P. Honigfort, S. Cheng, B. Hsiao, F. Yeh, M. Keating, E. Hsieh, and C. Tso, *Structural and Morphological Inhomogeneity of Short-Chain Branched Polyethylenes in Multi-Step Crystallization*, *J. Macromol. Sci., Phys.*, Vol. B39, Issue 3, p. 317-331, Beamline(s) X27C, 2000. [PR]
- J. Cho, J. Garrett, R. Xu, F. Yeh, B. Hsiao, J. Lin, and J. Runt, *Crystallization and Structure Formation of Strongly-Interacting Polymer Mixtures: Poly(ethylene oxide) and Styrene-Hydroxystyrene Random Copolymers of Strongly-Interacting Polymer Mixtures: Poly(ethylene oxide) and Styrene-Hydroxystyrene Random Copolymer*, *ACS National Meeting*, Vol. 85, Issue 2, p. 431-432, ACS, Beamline(s) X27C, 2001.
- B. Chu, *Structural studies during processing of high - strength fibers*, *ACS Polymeric Material Science Engineering Proceeding*, Vol. 85, p. 266, sponsored by ACS USA, Beamline(s) X27C, 2001.
- D. Crawford, E. Napadensky, N. Beck Tan, D. Reuschle, D. Mountz, K. Mauritz, K. Laverde, S. Gido, W. Liu, and B. Hsiao, *Structure/Property Relationships in Polystyrene-Polyisobutylene-Polystyrene Block Copolymers*, *Thermochim. Acta*, Vol. 367-368, p. 125-134, Beamline(s) X27C, 2001. [PR]
- B. Fu, B. Hsiao, S. Pagola, P. Stephens, H. White, M. Rafailovich, J. Sokolov, P. Mather, H. Joen, and et al, *Structural Development during Deformation of Polyurethane Containing Polyhedral Oligomeric Silsesquioxanes (POSS) Nanocrystals*, *Polymer*, Vol. 42, Issue 2, p. 599-611, Beamline(s) X27C and X3B1, 2000. [PR]
- B. Fu, W. Zhang, B. Hsiao, M. Rafailovich, J. Sokolov, G. Johansson, B. Sauer, S. Phillips, and R. Blanski, *Synthesis and Characterization of Segmented Polyurethane Containing Polyhedral Oligomeric Silsequioxane (POSS) Nanostructured Molecules*, *High Perform. Polym.*, Vol. 12, Issue 4, p. 565-571, Beamline(s) X27C, 2001. [PR]

- R. Gee, L. Fried, and R. Cook, *Structure of Chlorotrifluoroethylene/Vinylidene Fluoride Random Copolymers and Homopolymers by Molecular Dynamics Simulations*, *Macromolecules*, Vol. 34, p. 3050-3059, Beamline(s) X27C, 2001. [PR]
- M. Gelfer, L. Liu, C. Burger, H. Song, B. Chu, M. Si, C. Avila, and M. Rafailovich, *Phase Transition in Organoclays*, *ACS meeting, Chicago, Fall 2001, Polymeric Materials*, Vol. 85, p. 16-17, sponsored by American Chemical Society, ACS, US, Beamline(s) X27C, 2001.
- P. Huang, L. Zhu, S. Cheng, Q. Ge, R. Quirk, E. Thomas, B. Lotz, B. Hsiao, L. Liu, and F. Yeh, *Crystal Orientation Changes in Two-Dimensionally Confined Nanocylinders in a Poly(ethylene oxide)-*b*-polystyrene/Polystyrene Blend*, *Macromolecules*, Vol. 34, Issue 19, p. 6649, Beamline(s) X27C, BNL Report No. 4210, September 11, 2001. [PR]
- T. Koga, S. Zhou, B. Chu, J. Fulton, S. Yang, C. Ober, and B. Erman, *High-Pressure Cell for Simultaneous Small-Angle X-ray Scattering and Laser Light Scattering Measurements*, *Rev. Sci. Instrum.*, Vol. 72, p. 2679, Beamline(s) X27C, June 2001. [PR]
- G. Kumaraswamy, R. Verma, A. Issaian, P. Wang, J. Kornfield, F. Yeh, B. Hsiao, and R. Olley, *Shear-Enhanced Crystallization in Isotactic Polypropylene: 2. Analysis of the Formation of the Oriented Skin*, *Polymer*, Vol. 41, Issue 25, p. 8931-8940, Beamline(s) X27C, 2000. [PR]
- D. Lincoln, R. Vaia, Z. Wang, and B. Hsiao, *Secondary Structure and Elevated Temperature Crystallite Morphology of Nylon-6/Layered Silicate Nanocomposites*, *Polymer*, Vol. 42, Issue 4, p. 1621-1631, Beamline(s) X27C, 2000. [PR]
- D. Lincoln, R. Vaia, Z. Wang, B. Hsiao, and R. Krishnamoorti, *Temperature dependence of polymer crystalline morphology in nylon 6/montmorillonite nanocomposites*, *Polymer*, Vol. 42, Issue 25, p. 9975, Beamline(s) X27C, November 2001. [PR]
- T. Liu, Q. Wan, Y. Xie, C. Burger, L. Liu, and B. Chu, *Polymer-Assisted Formation of Giant Polyoxomolybdate Structures*, *J. Am. Chem. Soc.*, Vol. 123, p. 10966-10972, Beamline(s) X27C and X3A2, October 9, 2001. [PR]
- A. Nogales, B. Hsiao, R. Somani, S. Srinivas, A. Tsou, F. Balta-Calleja, and T. Ezquerro, *Shear-Induced Crystallization in Blends of Isotactic Polypropylene with Different Molecular Weight: In-situ Synchrotron Small- and Wide-Angle X-ray Scattering Studies*, *Polymer*, Vol. 42, Issue 12, p. 5247-5256, Beamline(s) X27C, 2001. [PR]
- J. Runt, *Crystallization and solid-state structure of model poly(ethylene oxide) blends*, *poly(ethylene oxide) blends*, *ACS Symposium Series*, Vol. 739, B.S. Hsiao, D.J. Lohse, and P. Cebe, Eds (Ed.) ACS, p. 218-231, Beamline(s) X27C, 2000, 2000.
- J. Samon, J. Schultz, B. Hsiao, S. Khot, and H. Johnson, *Structure Development during the Melt Spinning of Poly(oxymethylene) Fiber*, *Polymer*, Vol. 42, Issue 4, p. 1547-1559, Beamline(s) X27C, 2000. [PR]
- J. Samon, J. Schultz, B. Hsiao, J. Wu, and S. Khot, *Structure and Development during the Melt Spinning and Subsequent Annealing of Polybutene-1 Fibers*, *J. Polym. Sci., Part B: Polym. Phys.*, Vol. 38, Issue 14, p. 1872-1882, Beamline(s) X27C, 2000. [PR]
- R. Somani, C. Burger, B. Hsiao, and R. Stein, *Scattering from precursors of primary nucleation in sheared isotactic polypropylene melt*, *American Chemical Society, Division of Polymeric Materials Science and Engineering*, Vol. 85, p. 429-430, sponsored by American Chemical Society, American Chemical Society, Washington DC, Maryland, USA, Beamline(s) X27C and X3A2, 2001.
- R. Somani, B. Hsiao, A. Nogales, H. Fruitwala, S. Srinivas, and A. Tsou, *Structure Development During Shear Flow Induced Crystallization of i-PP: In-situ Wide-Angle X-Ray Diffraction Study*, *Macromolecules*, Vol. 34, Issue 17, p. 5902-5909, Beamline(s) X27C and X3A2, June/July 2001. [PR]
- R. Somani, B. Hsiao, A. Nogales, S. Srinivas, A. Tsou, I. Sics, F. Balta-Calleja, and T. Ezquerro, *Structure Development during Shear Flow Induced Crystallization of i-PP: In-Situ Small Angle X-ray Scattering Study*, *Macromolecules*, Vol. 33, Issue 25, p. 9385-9394, Beamline(s) X27C, 2000. [PR]
- W. Tang, N. Murthy, F. Mares, M. McDonnell, and S. Curran, *Poly (ethyleneterephthalate)-Poly (caprolactone) Block Copolymer: 1 Synthesis, Reactive Extrusion and Fiber Morphology*, *J. Appl. Polym. Sci.*, Vol. 74, Issue 7, p. 1858-1867, Beamline(s) X27C, 1999. [PR]
- Z. Wang, B. Hsiao, and C. Han, *Evolution of Morphology and Structure During Crystallization and Melting in Syndiotactic Polypropylene*, *Chin. J. of Appl. Chem.*, Vol. 18, Issue 5, p. 280-288, Beamline(s) X27C, May 2001.]
- Z. Wang, B. Hsiao, E. Sirota, and P. Agarwal, *A Simultaneous Small- and Wide-Angle X-Ray Scattering Study of the Early Stages of Melt Crystallization in Polyethylene*, *Polymer*, Vol. 41, Issue 25, p. 8825-8832, Beamline(s) X27C, 2000. [PR]
- Z. Wang, B. Hsiao, S. Srinivas, G. Brown, A. Tsou, S. Cheng, and R. Stein, *Phase transformation in quenched mesomorphic isotactic polypropylene*, *Polymer*, Vol. 42, Issue 18, p. 7561-7566, Beamline(s) X27C, Aug 2001. [PR]
- Z. Wang, R. Phillips, and B. Hsiao, *Morphology Development during Isothermal Crystallization in I. Isotactic and Atactic Polypropylene Blends*, *J. Polym. Sci., Part B: Polym. Phys.*, Vol. 38, Issue 19, p. 2580-2590, Beamline(s) X27C, 2000. [PR]
- Z. Wang, R. Phillips, and B. Hsiao, *Morphology development during isothermal crystallization. II. Isotactic and syndiotactic polypropylene blends*, *J. Polym. Sci., Part B: Polym. Phys.*, Vol. 39, Issue 16, p. 1876-1888, Beamline(s) X27C, Aug 2001. [PR]
- Z. Wang, X. Wang, B. Hsiao, S. Andjelic, D. Jamiolkowski, J. McDivitt, J. Fischer, J. Zhou, and C. Han, *Time-resolved isothermal crystallization of absorbable PGA-co-PLA copolymer by synchrotron small-angle X-ray scattering and wide-angle X-ray*, *Polymer*, Vol. 42, Issue 21, p. 8965-8973, Beamline(s) X27C, October 2001. [PR]
- Z. Wang, X. Wang, B. Hsiao, R. Phillips, F. Medelin-Rodriguez, H. Wang, S. Shrinivas, and C. Han, *5. Structure and morphology development in syndiotactic polypropylene during isothermal crystallization and subsequent melting*, *J. Polym. Sci., Part B: Polym. Phys.*, Vol. 39, Issue 23, p. 2982, Beamline(s) X27C, December 2001. [PR]
- S. Zhou, H. Hu, C. Burger, and B. Chu, *Phase Structural Transitions of Polyelectrolyte-Surfactant Complexes between Poly(vinylamine Hydrochloride) and Oppositely Charged Sodium Alkyl Sulfate*, *Macromolecules*, Vol. 34, p. 1772-1778, Beamline(s) X27C, 2001. [PR]
- S. Zhou, F. Yeh, C. Burger, H. Hu, T. Liu, and B. Chu, *SAXS Study on Complexes Formed by Anionic Poly(sodium methacrylate-*co*-N-isopropylacrylamide) Gels with Cationic Surfactants*, *Polym. Adv. Technol.*, Vol. 11, p. 235-241, Beamline(s) X27C, 2000. [PR]
- L. Zhu, *Phase and crystallization behaviors determined by self-organization, vitrification and crystallization in PS-*b*-PEO diblock copolymers*, Ph.D Thesis, The University of Akron, Ohio, USA, Beamline(s) X27C, 2000.

- L. Zhu, B. Calhoun, Q. Ge, R. Quirk, S. Cheng, E. Thomas, B. Hsiao, F. Yeh, L. Liu, and B. Lotz, *Initial-Stage Growth Controlled Crystal Orientations in Nanoconfined Lamellae of a Self-Assembled Crystalline-Amorphous Diblock Copolymer*, *Macromolecules*, Vol. 34, Issue 5, p. 1244-1251, Beamline(s) X27C, 2001. [PR]
- L. Zhu, S. Cheng, B. Calhoun, Q. Ge, R. Quirk, E. Thomas, B. Hsiao, F. Yeh, and B. Lotz, *Phase Structures and Morphologies Determined by Self-Organization, Vitrification and Crystallization: Confined Crystallization in an Ordered Lamellar Phase of PEO-b-PS Diblock Copolymer*, *Polymer*, Vol. 42, Issue 13, p. 5829-5839, Beamline(s) X27C, 2001. [PR]
- L. Zhu, S. Cheng, B. Calhoun, Q. Ge, R. Quirk, E. Thomas, B. Hsiao, F. Yeh, and B. Lotz, *Crystallization temperature-dependent crystal orientation within confined lamellae of a cooperatively self-assembled crystalline-amorphous diblock copolymer*, *J. Am. Chem. Soc.*, Vol. 122, p. 5957, Beamline(s) X27C, 2000. [PR]
- L. Zhu, P. Huang, S. Cheng, Q. Ge, R. Quirk, E. Thomas, J. Wittmann, B. Lotz, B. Hsiao, et al., *Dislocation-controlled perforated layer phase in a PEO-b-PS diblock copolymer*, *Phys. Rev. Lett.*, Vol. 86, p. 6030, Beamline(s) X27C, 2001. [PR/P]
- L. Zhu, P. Huang, S. Cheng, Q. Ge, R. Quirk, E. Thomas, B. Lotz, J. Wittmann, B. Hsiao, and F. Yeh, *Dislocation-Controlled Perforated Layer Phase in a PEO-b-PS Diblock Copolymer*, *Phys. Rev. Lett.*, Vol. 86, Issue 26, p. 6030, Beamline(s) X27C, June 25, 2001. [PR/P]
- L. Zhu, B. Mimnaugh, Q. Ge, R. Quirk, S. Cheng, E. Thomas, B. Lotz, B. Hsiao, F. Yeh, and L. Liu, *Hard and soft confinement effects on polymer crystallization in microphase separated cylinder-forming PEO-b-PS/PS blends*, *Polymer*, Vol. 42, p. 9121, Beamline(s) X27C, 2001. [PR]

### Beamline X28C

- N. Pastor, H. Weinstein, E. Jamison, and M. Brenowitz, *A Detailed Interpretation of OH Radical Footprints in a TBP-DNA Complex Reveals the Role of Dynamics in the Mechanism of Sequence-Specific Binding*, *J. Mol. Biol.*, Vol. 304, p. 55-68, Beamline(s) X28C, 2000. [PR]

### NSLS Staff

- D. Arena, R. Bartynski, and S. Hulbert, *The Electronic Structure of Ag/Cu(100) and Pd/Cu(100) Surface Alloys Studied By Auger-Photoelectron Coincidence Spectroscopy, Many-Particle Spectroscopy*, J. Berakdar (Ed.) Kluwer/Plenum, Dordrecht, Netherlands, USA, p. 471, BNL Report No. 68659, 2001.
- D. Arena, R. Bartynski, R. Nayak, A. Weiss, and S. Hulbert, *Line Shape of the Ag M4,5 VV Auger Spectra measured by Auger-Photoelectron coincidence Spectroscopy*, *Phys. Rev. B*, Vol. 63, p. 155102, BNL Report No. 68657, 2001. [PR]
- I. Ben-Zvi, J. Kewisch, J. Murphy, and S. Peggs, *Accelerator Physics Issues in Erhic, 2001 Particle Accelerator Conference*, Vol. 463, p. 94, 2001.
- G. Carr, S. Kramer, J. Murphy, R. Lobo, and D. Tanner, *Observation of Coherent Synchrotron Radiation from the NSLS VUV Ring*, *Nucl. Instrum. Meth. A*, Vol. 463, Issue 1-2, p. 387-392, May 2001. [PR]
- E. Charron and B. Sheehy, *Coherent Control in Intense Laser Fields, Molecules and Clusters in Intense Laser Fields*, Jan Posthumus (Ed.) Cambridge University Press, Cambridge, United Kingdom, p. 114-141, 2001.
- M. Corwin and S. Ehrlich, *National Synchrotron Light Source Activity Report 2000*, prepared for Department of Energy/BES, Washington, DC, by Government Printing Office, Washington, DC, USA, BNL Report No. 52615, 2001.
- F. Dilmanian, G. Morris, G. Le Duc, X. Huang, B. Ren, T. Bacarian, J. Allen, J. Kaled-Ezra, I. Orion, et al., *Response of avian embryonic brain to spatially segmented x-ray microbeams*, *Cell. Mol. Biol.*, Vol. 47, Issue 3, p. 485-493, 2001. [PR]
- A. Doyuran, M. Babzien, T. Shaftan, L. Yu, L. DiMauro, I. Ben-Zvi, W. Graves, E. Johnson, S. Krinsky, and et al, *Characterization of a High-Gain Harmonic-Generation Free-Electron Laser at Saturation*, *Phys. Rev. Lett.*, Vol. 86, Issue 26, p. 5902-5905, BNL Report No. 68031, June 25, 2001. [PR/P]
- P. Dumas and G. Williams, *Surface-Science and Microscopy Investigations using Infrared Synchrotron Radiation (ISBN 981-02-4480-0)*, *Chemical Applications and Synchrotron Radiation*, Series 354, Vol. 12, Tsun-Kong Sham (Ed.) World Scientific Publishing Co., Inc., River Edge, NJ, USA, BNL Report No. 67030, 2001.
- M. Ferrario, T. Katsouleas, L. Serafini, and I. Ben-Zvi, *Adiabatic Plasma Buncher*, *IEEE Transactions on Plasma Science*, Vol. 28, p. 1152, BNL Report No. 68344, 2000.
- C. Foerster, S. Kuznetsov, and I. Pogorelsky, *Monoenergetic Laser Wakefield Acceleration*, *Phys. Rev. ST AB*, Vol. 3, p. 021301, 2000. [PR]
- C. Foerster, C. Lanni, and K. Kanazawa, *Measurements of Photon Stimulated Desorption from Thick and Thin Oxide of KEKB Collider Copper Beam Chambers and a Stainless Steel beam Chamber*, *J. Vac. Sci. Technol. A*, Vol. 19, Issue 4, p. 1652, BNL Report No. 67885, Jul/Aug 2001. [PR]
- G. L. Carr, S. Kramer, L. Mihaly, D. Talbayev, and N. Jisrawi, *Diagnostic Synchrotron Topographic Imaging of Striations and other Defects in Langataite and Langanite Single Crystals and Assessment of their Influence on Resonator Performance*, *Proceedings of the 2001 Particle Accelerator Conference*, p. 318, Chicago, IL, USA, 2001.
- M. Gaarde, K. Schafer, K. Kulander, B. Sheehy, D. Kim, and L. DiMauro, *Strong Species Dependence of High Order Photoelectron Production in Alkali Metal Atoms*, *Phys. Rev. Lett.*, Vol. 84, Issue 13, p. 2822-2825, March 27, 2000. [PR/P]
- S. Galambosi, J. Soininen, K. Hamalainen, E. Shirley, and C. Kao, *Nonresonant Inelastic X-ray Scattering Study of Cubic Boron Nitride*, *Phys. Rev. B*, Vol. 64, p. 24102, BNL Report No. 68432, 2001. [PR]
- H. Hayashi, Y. Udagawa, C. Kao, J. Rueff, and F. Sette, *Plasmon Dispersion in Metallic Lithium-Ammonia Solutions*, *J. Electron. Spectrosc. Relat. Phenom.*, p. 113-119, BNL Report No. 68345, September 2000, 2001. [PR]
- H. Hayashi, N. Watanabe, Y. Udagawa, and C. Kao, *Synchrotron Small Angle X-ray Scattering of Melt Crystallized Polymers*, *The Eighth International Conference on Electronic Spectroscopy and Structure*, Berkeley, CA, USA, BNL Report No. 67620, 2001.
- M. Hein, P. Dumas, A. Otto, and G. Williams, *The Interaction of CO with C2H4 or Cs on Cu(111) Observed by Friction with the Conduction Electrons*, *Surf. Sci.*, Vol. 465, p. 249, BNL Report No. 67184, 2000. [PR]
- S. Hulbert and G. Williams, *Synchrotron Radiation Sources, Handbook of Optics: Classical, Vision, and X-ray Optics, 2nd Edition*, Vol. III, Chapter 32, M. Bass, J. Enoch, E. van Stryland, and W. Wolfe (Ed.) McGraw-Hill, New York, NY, USA, p. 32.1-32.20, BNL Report No. 67004, 2001.
- A. Ignatov, N. Ali, and S. Khalid, *Mn K-edge XANES study of the La<sub>1-x</sub>Ca<sub>x</sub>MnO<sub>3</sub> colossal magnetoresistive manganites*, *Phys. Rev. B*, Vol. 64, p. 014413, 2001. [PR]

- A. Ignatov, S. Khalid, and N. Ali, *Mn K-edge XANES study of La<sub>1-x</sub> Ca<sub>x</sub> MnO 3?d CMRs*, International Conference Proceedings on X-ray and Inner-Shell Processes (X-99), p. 246, 1999.
- A. Kao and I. Pogorelsky, *Microbunch Temporal Diagnostic by Compton Scattering in Interfering Laser Beams*, 8th Workshop on Advanced Accelerator Concepts, Vol. 472, p. 765, sponsored by DOE, AIP, BNL Report No. 68273, 2001
- C. Karanfil, Z. Zhong, L. Chapman, R. Fischetti, G. Bunker, C. Segre, and B. Bunker, *A bent Laue Analyzer Detection System for Dilute Fluorescence XAFS*, Synchrotron Radiation Instrumentation, Eleventh US National Conference, Vol. AIP CP 521, Issue 1, p. 178-182, sponsored by SSRL, American Institute of Physics, Woodbury, NY, USA, 2001.
- S. Kashiwagi, M. Washio, T. Kobuki, R. Kuroda, I. Ben-Zvi, I. Pogorelsky, K. Kusche, J. Skaritka, V. Yakimenko, and X. Wang, *Observation of High Intensity X-Rays in Inverse Compton Scattering Experiment*, Nucl. Instrum. Meth. A, Vol. 455, p. 36, BNL Report No. 66934, 2000. [PR]
- W. Kimura, M. Babzien, I. Ben-Zvi, I. Campbell, D. Cline, R. Florio, J. Gallardo, S. Gottschalk, K. Kusche, and I. Pogorelsky, *Stella Experiment: Design AND Model Prediction*, 8th Workshop on Advanced Accelerator Concepts, Vol. 472, p. 563, sponsored by DOE, AIP, BNL Report No. 66297, 1999.
- W. Kimura, L. Campbell, C. Dilley, S. Gottschalk, D. Quimby, A. van Steenbergen, M. Babzien, I. Ben-Zvi, J. Gallardo, et al., *Detailed Experimental Results For Laser Acceleration Staging*, Phys. Rev. ST AB, Vol. 4, p. 101-301, BNL Report No. 68752, 2001. [PR]
- W. Kimura, A. van Steenbergen, M. Babzien, I. Ben-Zvi, L. Campbell, D. Cline, C. Dilley, J. Gallardo, S. Gottschalk, and et al, *First Staging of Two Laser Accelerators*, Phys. Rev. Lett., Vol. 86, Issue 18, p. 4041-4043, BNL Report No. 68326, April 30, 2001. [PR/P]
- S. Krinsky, S. Hulbert, C. Kao, P. Siddons, E. Blum, L. Berman, J. Murphy, E. Johnson, I. Ben-Zvi, and et al, *Workshop on NSLS Upgrades*, prepared for Brookhaven National Laboratory (BNL), Upton, NY, by USA, BNL Report No. 67839, 2000.
- R. Kuroda, M. Washio, S. Kashiwagi, T. Kobuki, I. Ben-Zvi, X. Wang, T. Hori, F. Sakai, A. Tsunemi, and et al, *High-quality Beam Generation Using an RF Gun and a 150 MeV Microtron*, Nucl. Instrum. Meth. A, Vol. 455, p. 222-227, BNL Report No. 68410, 2000. [PR]
- R. Lafon, J. Chaloupka, B. Sheehy, P. Paul, P. Agostini, K. Kulander, and L. DiMauro, *Electron Energy Spectra from Intense Laser Double Ionization of Helium*, Phys. Rev. Lett., Vol. 86, Issue 13, p. 2762-2765, March 26, 2001. [PR/P]
- Y. Liu, I. Pogorelsky, and D. Cline, "Gas Breakdown Limit and Maximum Acceleration on Gradient for Inverse Cherenkov Laser Accelerator", Nucl. Instrum. Meth. A, Vol. 430, p. 171-179, BNL Report No. 68268, 1999. [PR]
- H. Mao, C. Kao, and R. Hemley, *Momentum Dependence of Excitations of Benzene Rings in Condensed Phases*, Conference-European Summer School 2000: New Materials and their Dynamics - advances through Synchrotron Radiation, Rostock, Germany, BNL Report No. 68351, 2001.
- L. Mermanga, G. Krafft, V. Lebedev, and I. Ben-Zvi, *An Energy Recovery Electron Linac-on-Ring Collider*, 2nd Workshop on Physics with a Polarized-Electron Light-ion Collider, Vol. 588, p. 204, AIP Conference Proceedings, Cambridge, MA, USA, BNL Report No. 67849, 2001.
- S. Milton, E. Gluskin, N. Arnold, C. Benson, W. Berg, S. Biedron, M. Borland, Y. Chae, R. Dejus, and et al, *Exponential Gain and Saturation of a Self-Amplified Spontaneous Emission Free-electron Laser*, Science, Vol. 292, p. 2037-2041, BNL Report No. 68411, June 15, 2001. [PR/P]
- P. Montanez and P. Sievers, *Validation of a Computer Code for use in the Mechanical Design of Spallation Neutron Targets*, J. Neutron Res., Vol. 9, Issue 1, p. 1-20, BNL Report No. 67801, October 2001. [PR]
- P. Montanez, J. Yang, M. Hirose, F. Sakai, A. Tsunemi, M. Yorozu, Y. Okada, A. Endo, X. Wang, and et. al., *A New Chemical Analysis System Using a Photocathode RF Gun*, Nucl. Instrum. Meth. A, Vol. 455, p. 99-103, BNL Report No. 68409, 2001. [PR]
- J. Murphy and J. Wang, *Correlations and Coherence in the Microwave Instability*, Nucl. Instrum. Meth. A, Vol. A458, p. 605-618, BNL Report No. 68217, February 2001. [PR]
- P. Pietraski, P. Voltz, and L. Furenlid, *Sequence estimation of piled-up pulses in synchrotron-based XAFS*, J. Synch. Rad., Vol. 6, p. 152-154, 1999. [PR]
- P. Pietraski and Z. Zojceski, *Fast Centroid Estimation Algorithm for High-Rate Detectors based on a Two-Point Gaussian Fit*, Trans. on Nucl. Sci., Vol. 47, Issue 4, p. 1510, BNL Report No. 66958, 2000.
- I. Pogorelsky, *Terawatt Picosecond CO<sub>2</sub> Laser Technology for High Energy Physics Applications*, (invited paper), 8th Workshop on Advanced Accelerator Concepts, Vol. 472, p. 86, sponsored by DOE, AIP, 1999.
- I. Pogorelsky, N. Andreev, and S. Kuznetsov, *Monochromatic Laser Wakefield Acceleration*, Lasers '98, p. 898, sponsored by SOQUE, STS Press, McLean, VI, USA, 1999.
- I. Pogorelsky, N. Andreev, and S. Kuznetsov, *Practical Approach to Monochromatic LWFA*, 8th Workshop on Advanced Accelerator Concepts, Vol. 472, p. 444, sponsored by DOE, AIP, BNL Report No. 68272, 1999.
- I. Pogorelsky, I. Ben-Zvi, M. Babzien, K. Kusche, J. Skaritka, I. Meshkovsky, A. Dublov, V. Lekomtsev, I. Pavlishin, and Yu. Boloshin, *First Picosecond Terawatt CO<sub>2</sub> Laser*, Laser Optics '98, Vol. 3683, p. 15, sponsored by SPIE, 1999.
- I. Pogorelsky, I. Ben-Zvi, X. Wang, and T. Hirose, *Femtosecond Laser Synchrotron Sources Based on Compton Scattering in Plasma Channels*, Nucl. Instrum. Meth. A, Vol. 455, p. 176, BNL Report No. 66933, 2000. [PR]
- I. Pogorelsky, W. Kimura, D. Quimby, N. Andreev, and S. Kuznetsov, *Experimental Approach to Laser-Driven Monochromatic Electron Accelerators*, (invited paper), ICONO '98, Vol. 3735, p. 175, sponsored by SPIE, 1999.
- I. Pogorelsky, I. Meshkovsky, A. Dublov, I. Pavlishin, Y. Boloshin, G. Deineko, and A. Tsunemi, *Optical Design and Modeling of the First Picosecond Terawatt CO<sub>2</sub> Laser at the BNL ATF*, LASERS' 98, p. 911, sponsored by SOQUE, STS Press, McLean, VI, USA, 1999.
- I. Pogorelsky, V. Struzhkin, J. Shu, R. Hemley, H. Mao, C. Kao, J. Rueff, and G. Shen, *Magnetism in FeO at megabar pressures from x-ray emission spectroscopy*, Phys. Rev. Lett., Vol. 83, p. 4101-4104, BNL Report No. 66998, 2001. [PR/P]
- Q. Qian, T. Tyson, C. Kao, W. Prellier, J. Bai, A. Biswas, and R. Greene, *Strain-induced Local Distortions and Orbital Ordering in Nd<sub>0.75</sub> Sr<sub>0.25</sub> MnO<sub>3</sub>*, Phys. Rev. B, Vol. 63, p. 224424, BNL Report No. 68360, June 2001. [PR]
- G. Rakowsky, J. Aspenleiter, L. Solomon, R. Carr, and R. Ruland, *Measurement and Optimization of the VISA Undulator*, 1999 Particle Accelerator Conference, p. 2698-2700, sponsored by IEEE and APS, IEEE, Piscataway, NJ, USA, BNL Report No. 66499, 1999.
- C. Sanchez-Hanke and C. Kao, *An Element Sensitive Hysteresis Loop Study of an Exchange Biased Co/NiO Bilayer*, BNL Report No. 67420, May 2001.

- B. Sheehy, *Chemical Processes in Intense Optical Fields*, *Annual Reports on the Progress of Chemistry, Section C*, Vol. 97, p. 383-410, 2001.
- B. Sheehy, T. Clatterbuck, C. Lynga, J. Martin, D. Kim, L. DiMauro, M. Gaarde, K. Schafer, P. Agostini, and et al, *Strong Field Physics in a Scaled Interaction*, *Laser Physics*, Vol. 11, Issue 2, p. 226-230, February 2001.
- W. Siu, R. Bartynski, and S. Hulbert, *The role of defects at low concentrations in the NH<sub>3</sub>/TiO<sub>2</sub>(110) adsorption system: An Auger-photoelectron coincidence spectroscopy study*, *Chem. Phys.*, Vol. 113, Issue 23, p. 10697, BNL Report No. 68658, December 15, 2000. [PR]
- I. Towne and S. Krinsky, *Future Light Sources Based upon Photo-injected Energy Recovery Linacs*, *Synch. Rad. News*, Vol. 14, p. 20, BNL Report No. 68027, 2001.
- N. Towne, *Longitudinal Simulations and Measurements of Stretched Bunches*, *Phys. Rev. ST AB*, Vol. 4, p. 114401, BNL Report No. 68643, 2001. [PR]
- N. Towne, *Analytic Properties Of The Longitudinal Beam Transfer Function*, *2001 Particle Accelerator Conference*, p. 1806-1808, sponsored by IEEE and APS, IEEE, Piscataway, NJ, USA, BNL Report No. 68589, 2001.
- N. Towne, *Fokker-Planck Simulations of Bunched Beams: High-Q RF Modes and Response Functions*, *2001 Particle Accelerator Conference*, p. 2882-2884, sponsored by IEEE and APS, IEEE, Piscataway, NJ, USA, BNL Report No. 68474, 2001.
- N. Towne, *Longitudinal Measurements and Simulations of Stretched Bunches In The NSLS VUV Ring*, *2001 Particle Accelerator Conference*, p. 3449-3451, sponsored by IEEE and APS, IEEE, Piscataway, NJ, USA, BNL Report No. 68470, 2001.
- A. Tremaine, A. Murokh, and X. Wang, *Visa Undulator Re-Alignment using an Optical Monitoring System*, BNL Report No. 68170, 2001.
- J. Wang, S. Mane, and N. Towne, *Single Bunch Beam Breakup-A General Solution*, *7th European Particle Accelerator Conference*, p. 1179-1181, sponsored by EPAC, EPAC 2000 Editorial Board, Vienna, AUSTRIA, J. Laclare (Ed.) BNL Report No. 67563, 2000.
- X. Wang, *Proceeding of Workshop on Photo-injector for Energy Recovery Linac*, BNL Report No. 52624, 2001.
- X. Wang, M. Babzien, I. Ben-Zvi, X. Chang, S. Pierov, and M. Woodle, *Design Studies for the LCLS 120 Hz RF Gun*, BNL Report No. 67922, November 2000.
- X. Wang, M. Babzien, I. Ben-Zvi, R. Malone, and V. Yakimenko, *FEL Technologies R&D and Sase Gain Enhancement Observation at the BNL ATF*, *European Particle Accelerator Conference 2000*, p. 779, sponsored by EPAC, EPAC 2000 Editorial Board, Vienna, AUSTRIA, BNL Report No. 67635, 2001.
- X. Wang, I. Ben-Zvi, R. Malone, and V. Yakimenko, *High-resolution Beam Profile Monitor R&D at the BNL ATF*, *European Particle Accelerator Conference 2000*, p. 1821, sponsored by EPAC, EPAC 2000 Editorial Board, Vienna, AUSTRIA, BNL Report No. 67636, 2001.
- J. Woicik, E. Nelson, D. Heskett, J. Warner, L. Berman, B. Karlin, I. Vartanyants, M. Hasan, T. Kendelewicz, et al., *X-ray standing-wave investigations of valence electronic structure*, *Phys. Rev. B*, Vol. 64, p. 125-115, BNL Report No. 68710, September 2001. [PR]
- Z. Zhong, F. Dilmanian, T. Bacarian, N. Zhong, D. Chapman, B. Ren, X. Wu, and H. Weinmann, *Producing parallel x rays with a bent-crystal monochromator and an x-ray tube*, *Med. Phys.*, Vol. 28, p. 1931-1936, 2001. [PR]